

**A SYNOPSIS, CATALOGUE, AND BIBLIOGRAPHY OF
THE NEUROPTEROID INSECTS OF TEM-
PERATE NORTH AMERICA.**

BY NATHAN BANKS.

In the following pages the author has attempted to make a preliminary compilation of our knowledge of the Neuropteroïd insects of the United States, in the form of a synopsis to the genera, a catalogue of the species, and a bibliography since Hagen's "Synopsis" in 1861. In the catalogue I have given the synonymy that has been noted since Hagen's "Synopsis." The progress of Entomology no longer allows us to call these insects "Neuroptera," so I have used the term "Neuropteroïd" to indicate, as near as possible, their general affinities. I have omitted the Mallophaga, partly because I know little of the group personally, partly because Hagen did not treat of them, and partly because they will usually be studied in connection with other parasites, rather than with the insects that occupy the following pages.

I desire to thank Mr. Alex. D. MacGillivray for the help he has given me, especially in the Ephemeridæ.

When an Arthropod obtained wings a new life was opened to it, and with this new life a myriad of possibilities. So, at the beginning of the winged series of insects, one finds a large number of allied types; more or less related to each other, but differing in many important characters. These primitive insects, the forerunners of the other winged orders, have been called Neuroptera. They are separated by no good characters from Orthoptera, but with the latter order they can be tolerably well separated from the other orders of insects, viz., by their biting mouth-parts, the four many-veined membranous wings, and their soft bodies.

As all definitions in Nature cannot be absolute, this, of course, has plenty of exceptions. In regard to the classification, I have adopted that which will represent, as near as possible, what I understand to be natural groups. Briefly, this classification is as follows:

Super-order **PHYLOPTERA.**Order **PLATYPTERA.**

Sub-order PLECOPTERA.

Family PERLIDÆ.

Sub-order CORRODENTIA.

Super-family PSOCINA.

Family ATROPIDÆ.

Family PSOCIDÆ.

Super-family TERMITINA.

Family TERMITIDÆ.

Family EMBIDÆ.

Sub-order MALLOPHAGA.

Order **SUBULICORNIA.**

Sub-order PLECTOPTERA.

Family EPHEMERIDÆ.

Sub-order ODONATA.

Super-family AGRIONINA.

Family CALOPTERIGIDÆ.

Family AGRIONIDÆ.

Super-family LIBELLULINA.

Family GOMPHIDÆ.

F. CORDULEGASTERIDÆ.

Family AESCHNIDÆ.

Family CORDULIDÆ.

Family LIBELLULIDÆ.

Order **NEUROPTERA.**

Sub-order PLANNIPENNIA.

Super-family SIALINA.

Family SIALIDÆ.

Family RAPHIDIDÆ.

Super-family MEGALOPTERA.

Family MANTISPIDÆ.

Family CHRYSOPIDÆ.

Family HEMEROBIDIDÆ.

Family MYRMELEONIDÆ.

Family CONIOPTERIGIDÆ.

Sub-order MECAPTERA.

Family PANORPIDÆ.

Order **TRICHOPTERA.**

Family PHRYGANEIDÆ.

Family LIMNOPHILIDÆ.

F. SERICOSTOMATIDÆ.

Family HYDROPTILIDÆ.

Family LEPTOCERIDÆ.

Fam. HYDROPSYCHIDÆ.

Fam. RHYACOPHILIDÆ.

In the text, for each family, I give a figure of the venation, with explanation to facilitate the use of the keys. Most of the terms will be found in ordinary text-books on Entomology. It must be remembered that a key is not a criterion, but a guide.

 Key to Suborders.

- 1.--Wings rudimentary or wanting 10.
 Wings two 5.
 Wings four 2.
- 2.--Hind wings broader than fore wings, folded in repose, antennæ prominent. 3.
 Hind wings never folded, often no broader than fore wings. 5.
- 3.--Tarsi 5-jointed 4.
 Tarsi 3-jointed PLECOPTERA.
- 4.--Costal area with many transverse veins SIALIDÆ.
 Costal area nearly free TRICHOPTERA.
- 5.--Antennæ short, inconspicuous SUBULICORNIA. 6.
 Antennæ longer, distinct 7.
- 6.--Hind wings much shorter and narrower than fore wings, tarsi 4- or 5-jointed, caudal setæ present PLECTOPTERA.
 Hind wings about equal to fore wings, tarsi 3-jointed, no caudal setæ. 8.
 ODONATA.

7.—Tarsi 5-jointed NEUROPTERA 8.
 Tarsi 2-3- or 4-jointed CORRODENTIA 9.
 8.—Mouth rostrated MECAPTERA.
 Mouth not rostrated PLANIPENNIA.
 9.—Wings with many veins, prothorax distinct TERMITINA.
 Wings with few veins, prothorax indistinct PSOCINA.
 10.—Mouth rostrated MECAPTERA.
 Mouth not rostrated 11.
 11.—Tarsi 4-jointed, prothorax distinct TERMITINA.
 Tarsi 3-jointed 12.
 12.—Prothorax inconspicuous, no caudal setæ PSOCINA.
 Prothorax distinct, two caudal setæ PLECOPTERA.

Order PLATYPTERA.

Suborder PLECOPTERA.

PERLIDÆ.

The body is long, soft and depressed; the antennæ long and setaceous. The mouth-parts are well developed. The larvæ are aquatic, and usually found under stones in running water. The adults are called "stone-flies."

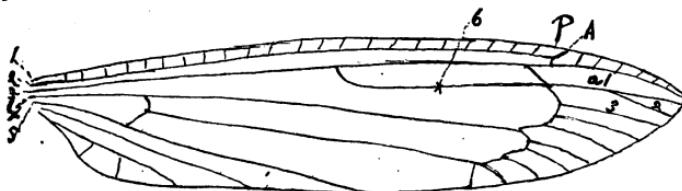


Fig. 1.—A Perlid.

1, costal; 2, subcostal; 3, radius; 4, cubitus; 5, postcubitus; 6, radial sector; P, pterostigma; A, arculus; a1, 2, 3, apical cells.

Key to Genera.

1.—Wings with many transverse irregular veins **Pteronarcys.**
 Wings with few more regular transverse veins 2.
 2.—Submarginal apical space with some transverse veins 3.
 Submarginal apical space without transverse veins 4.
 3.—Imago with external branchiae **Dictyopteryx.**
 Imago without external branchiae **Acroneuria.**
 4.—Caudal setæ present 5.
 Caudal setæ absent 10.
 5.—All palpal joints equally thick **Capnia.**
 Last palpal joint thinner, filiform 6.
 6.—Hind wings broader than fore wings, anal space present 7.
 Hind wings not broader than fore wings, anal space absent **Isopteryx.**
 7.—Between costa and radius, beyond end of subcosta, at least three cross-veins 8.
 Between costa and radius beyond end of subcosta, but one cross-vein.

Chloroperla.

8.—Subcostal accessory veinlet of fore wings with four branches... **Isogenus.**
 Subcostal accessory veinlet of fore wings with less than four branches 9.
 9.—Two ocelli..... **Pseudoperla.**
 Three ocelli..... **Perla.**
 10.—All tarsal joints equally long..... **Taeniopteryx.**
 Second joint shorter than others 11.
 11.—Anal space of hind wings small, veins of pterostigma simple.... **Leuctra.**
 Anal space of hind wings larger, veins of pterostigma form an X. **Nemoura.**

Suborder CORRODENTIA.

Super-family *TERMITINA.*

This embraces two families, which may be separated as follows:

Tarsi four jointed **TERMITIDÆ.**
 Tarsi three jointed **EMBIDÆ.**

TERMITIDÆ.

These are termed "white ants," since they live somewhat on the plan of the true ants. The workers and soldiers are wingless, the males and females winged. They are mostly tropical, but one species is common all over the United States.

Our genera may be separated as follows:

1.—Ocelli absent **Termopsis.**
 Ocelli present..... 2.
 2.—Costal area veined, tarsi with apical plantula, prothorax large, oblong. **Calotermes.**
 Costal area free, plantula absent, prothorax cordate..... **Termes.**

EMBIDÆ.

Of this family we have but one genus (*Oligotoma*) and one species, found in Florida.

Super-family *PSOCINA.*

This embraces two families, easily separated as below:

Ocelli present, wings well developed..... **PSOCIDÆ.**
 Ocelli absent, wingless or rudimentary wings..... **ATROPIDÆ.**

ATROPIDÆ.

The species of this group are similar to the true Psocidæ. They live usually in concealed places. Our genera may be separated as follows:

1.—Meso- and metathorax united, no wings..... **Atropos.**
 Meso- and metathorax separate, rudimentary wings..... 2.
 2.—Wings with veins..... **Dorypteryx.**
 Wings veinless, in form of squamæ or tubercles..... 3.
 3.—Squamæ small, hyaline..... **Clothilla.**
 Squamæ in the form of scars..... **Lepinotus.**
 Small tubercles in the place of squamæ..... **Hyperetes.**

PSOCIDÆ.

The head is large, the prothorax very small, the body soft; the wings with a few curved veins; the hind wings smaller than the fore wings; the antennæ long.

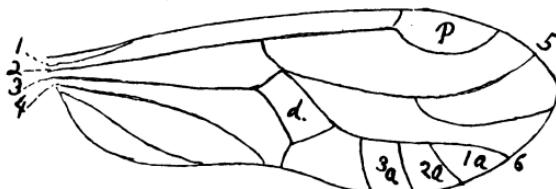


Fig. 2.—A Psocid.

1, costal; 2, subcostal; 3, radius; 4, cubitus; 5, anterior branch of radial sector; 6, posterior branch of radial sector; 1, 2, 3a, posterior cells; P, pterostigma; d, discal cell.

Key to the Genera.

1.—Wings with scales and long hairs..... **Amphantomum.**
 Wings without hairs and scales, hyaline..... 2.

2.—Tarsi 3-jointed..... 3.

3.—Tarsi 2-jointed..... 4.

3.—Discoidal cell closed..... **Myopsocus.**
 Discoidal cell open..... **Elipsocus.**

4.—Discoidal cell closed..... 5.

Discoidal cell open..... 6.

5.—Discoidal cell four-sided..... **Psocus.**
 Discoidal cell five-sided..... **Amphigerontia.**

6.—Third posterior cell elliptical..... **Cæcilius.**
 Third posterior cell elongated..... **Polypsocus.**
 Third posterior cell absent..... **Peripsocus.**

Order SUBULICORNIA.

Suborder PLECTOPTERA.

EPHEMERIDÆ.

The "May flies" are easily recognized by their short antennæ, small hind wings and the caudal setæ. The larvæ are aquatic.

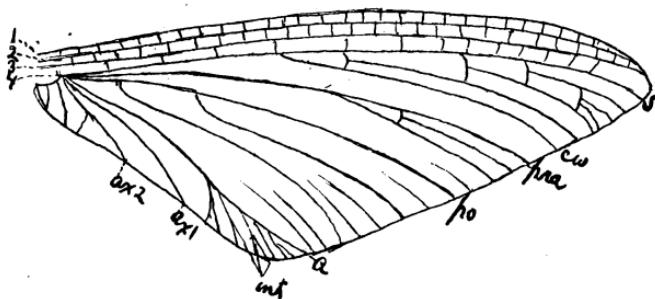


Fig. 3.—An Ephemerid.

1, costal; 2, subcostal; 3, radius; 4, cubitus; 5, sector; cu, cubitus; po, post-branchial; pra, præbranchial; a, anal; int, intercalary vein; ax 1, 1st axillary; ax 2, 2d axillary.

Key to the Genera.

1.--One pair of wings.....2.
 Two pairs of wings.....3.

2.--Three setæ.....
 Two setæ.....
Cænis.
Cleon.

3.--Hind tarsi with five joints.....4.
 Hind tarsi with four joints (or less).....6.

4.--Mesothorax scutel very large.....
 Mesothorax scutel normal.....5.

5.--Intercalary veins in fore wing.....
 No intercalary veins, or very few.....
Siphlurus.
Heptagenia.

6.--Hind wings rudimentary, few veined, small species.....7.
 Hind wings well developed, many veined.....9.

7.--Hind wings very narrow, elongate, bi-veined.....
 Hind wings broader, obtuse, oblong.....8.

8.--Fore wings with cross-veins along whole costal area.....
 Fore wings without cross-veins in basal half of costal area.....
Callibaetis.
Baetis.

9.--Few cross-veins in basal half of costal area, three setæ, most of cross-veins
 in apical half of wing, small species.....
Ephemerella.
 Unlike above.....10.

10.--Anal vein meets postbranchial at base, three setæ.....11.
 Anal vein separated at base from postbranchial.....12.

11.--Median seta subequal to others.....
 Median seta far shorter than others.....
Leptophlebia.
Blasturus.

12.--The ♂ with two setæ, ♀ with three, ♀ with hind legs longer than other
 pairs, white species.....
Polymitareys.
 Unlike above.....13.

13.--For males.....14.
 For females.....16.

14.--Median seta very rudimentary.....
 Median seta about as long as others.....
Ephemerella.

15.--Eyes separated by a space only as wide as ocellus, front legs not elongated,
 pale in color.....
 Eyes separated by a space twice as wide as ocellus, fore legs elongated,
 darker in color.....
Pentagenia.
Hexagenia.

16.--Median seta rudimentary.....
 Median seta subequal to others.....17.

17.--Abdominal segments 6-10 over one-half the length of abdomen.
Ephemerella.
 Abdominal segments 6-10 not over one-half the length of abdomen.
Pentagenia.

Suborder ODONATA.

The "Dragon-flies" are among the most common of our Neuropteroid insects. Our forms have been quite thoroughly studied, but the best work has, unfortunately, been published in an almost inaccessible Belgian journal. If good English descriptions were easily

available, I doubt not that the study of these interesting insects would rival that of butterflies. Our forms have been arranged in seven families.

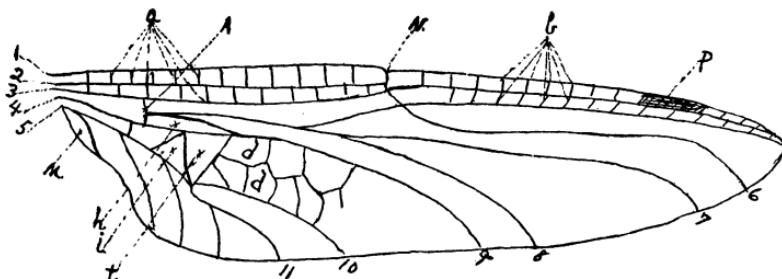


Fig. 4.—Dragon Fly.

1, costal; 2, subcostal; 3, median; 4, submedian; 5, postcostal; 6, nodal sector; 7, sub-nodal sector; 8, median sector; 9, short sector; 10, upper sector of the triangle; 11, lower sector of the triangle; A, arculus; M, membranule; N, nodus; P, pterostigma; a, antecubital; b, postcubital; d, discoidal areolets; h, hypertriagonal space; i, internal triangle; t, triangle.

Key to the Families.

- 1.—Wings alike, vertical in repose, eyes peduncled..... 2.
- Wings dissimilar, horizontal in repose, eyes not peduncled..... 3.
- 2.—At least five antecubititals..... CALOPTERYGIDÆ.
- But two antecubititals..... AGRIONIDÆ.
- 3.—Antecubititals of first and second series not corresponding, except at base.... 4.
- Antecubititals of first and second series corresponding..... 5.
- 4.—Eyes remote..... GOMPHIDÆ.
- Eyes touching at a single point..... CORDULEGASTERIDÆ.
- Eyes touching for some distance..... AESCHNIDÆ.
- 5.—Eyes tubercled behind..... CORDULIDÆ.
- Eyes not tubercled behind..... LIBELLULIDÆ.

Key to the Genera.

CALOPTERYGIDÆ.

- 1.—Basal space free, wings broad..... **Calopteryx.**
- Basal space reticulate, wings narrow..... **Hetaerina.**

AGRIONIDÆ.

- 1.—Median and subnodal sectors arise almost under the nodus..... 3.
- Median and subnodal sectors arise nearer the arculus than nodus..... 2.
- 2.—Nodal sector arising $1\frac{1}{2}$ cells after the nodus..... **Archilestes.**
- Nodal sector arising 3-5 cells after the nodus..... **Lestes.**
- 3.—Bristles on legs very long, each about twice the distance from the base of one to the next; larger species **Argia.**
- Bristles on legs much shorter; smaller species..... **Agrion.**

Subgenera of *AGRION*.

1.—No spine at end of eighth segment of ♀ 2.
 A spine at end of eighth segment of ♀ 6.

2.—Lower sector of triangle arising before the basal postcostal nervure 3.
 Lower sector of triangle arising at or after the basal postcostal nervure.

Erythragrion.

3.—Two postocular spots 4.
 No postocular spots 5.

4.—Abdomen very slender, color metallic-green *Nehalennia*.
 Abdomen less slender, color less metallic *Agrion*.

5.—Color red *Pyrrhosoma*.
 Color bronzed on blue or yellow *Erythromma*.

6.—Tenth segment of ♂ a little prolonged above 7.
 Tenth segment of ♂ not prolonged above *Enallagma*.

7.—Inferior sector of triangle arising before the basal postcostal nervure 8.
 Inferior sector of triangle arising at basal postcostal nervure *Oxyagrion*.

8.—Two postocular spots 9.
 No postocular spots *Amphiagrion*.

9.—Pterostigma of ♂ removed from costa *Anomalagrion*.
 Pterostigma of ♂ normal *Ischnura*.

GOMPHIDÆ.

1.—Labium entire 2.
 Labium bifid, pterostigma very long *Tachyopteryx*.

2.—Triangle with transverse veins 3.
 Triangle without transverse veins *Gomphus*.

3.—Superior side of triangle longer than interior 4.
 Superior side of triangle shorter than interior *Gomphoides*.

4.—Feet short *Progomphus*.
 Feet very long *Hagenius*.

Subgenera of *GOMPHUS*.

1.—Wings flavescent at base *Herpetogomphus*.
 Wings not flavescent at base 2.

2.—Thorax almost wholly greenish, dark marks faint, narrow and brownish.
 femora mostly yellow *Ophiogomphus*
 Thorax with dark marks more distinct, broader, often confluent, legs mostly
 black 3.

3.—Hind femora extremely long and spinous *Dromogomphus*
 Hind femora not very long or spinous 4.

4.—Dorsum of thorax with a single, median, yellow spot *Octogomphus*.
 Dorsum with lateral yellow or green stripes *Gomphus*.

CORDULEGASTERIDÆ.

We have but one genus (*Cordulegaster*) in this family.

ÆSCHNIDÆ.

1.—Triangle with one transversal *Gomphæschna*.
 Triangle with two or more transversals 2.

2.—Subnodal sector furcate in hind wings..... 3.
 Subnodal sector not furcate in hind wings..... 4.

3.—Anal angle of ♂ rounded, longitudinal vein below subnodal sector does not reach the margin of the wing, but ends in the wing about as far from anterior as from posterior margin..... **Anax.**
 Anal angle of ♂ acute, above vein ends in posterior margin or near it. **Æschna.**

4.—Triangle very long, superior side much more than twice as long as inferior, fore wing broadest beyond nodus..... **Neuræschna.**
 Triangle shorter, superior side barely twice as long as inferior, fore wing broadest at nodus **Basiæschna.**

CORDULIDÆ.

1.—Hypertriagonal space free, sectors of arculus free at origin..... 2.
 Hypertriagonal space traversed, sectors of arculus more or less united at origin..... **Macromia.**

2.—No internal triangle to hind wings..... **Cordulia.**
 Internal triangle present..... **Epitheca.**

LIBELLULIDÆ.

1.—Triangle of wings four sided..... **Nannothemis.**
 Triangle of wings three sided 2.

2.—Eyes connected in a long space, two rings on abdominal segments 2-4, hind wings very broad at base, sectors of arculus pedicellate..... **Pantala.**
 Eyes connected in a short space, but one ring on basal abdominal segments.. 3

3.—Rings on segments 2-4, hind wings extremely broad at base **Tramea.**
 Rings on segments 2-3, none on fourth, hind wings much less broad 4.

4.—Hind lobe of prothorax large, bilobed 5.
 Hind lobe of prothorax small entire 9.

5.—Sectors of arculus pedicellate..... 6.
 Sectors of arculus not pedicellate..... 8.

6.—Abdomen very slender, nearly as long as the wings; large species. **Lepthemis.**
 Abdomen thicker, shorter than wings; smaller species 7.

7.—Abdomen broad, nearly equally wide throughout..... **Mesothemis.**
 Abdomen more slender, smaller species. **Diplax.**

8.—Upper side of triangle as long as inner side, abdomen broad. **Perithemis.**
 Upper side of triangle much shorter than inner side. **Celithemis.**

9.—Sectors of arculus pedicellate..... 10.
 Sectors of arculus not pedicellate..... **Libellula.**

10.—Pterostigma very long, covering four or five cells..... **Orthemis.**
 Pterostigma covering not more than three cells..... 11.

11.—Hind wings distinctly broader at base than at nodus..... **Dythemis.**
 Hind wings not broader at base than at nodus..... **Trithemis.**

Order NEUROPTERA.

Suborder PLANIPENNIA.

This is divided into two super-families as below:

Hind wings with an anal space..... **SIALINA.**
 Anal space absent..... **MEGALOPTERA.**

SIALINA.

This embraces two families, separated as follows:

Prothorax quadrangular..... *SIALIDÆ.*
 Prothorax long and cylindrical..... *RAPHIDIDÆ.*

Key to the Genera.*SIALIDÆ.*

1.—No ocelli..... *Sialis.*
 Ocelli present..... 2.
 2.—Mandibles prominent, in ♂ elongate..... *Corydalis.*
 Mandibles less prominent, not elongate..... *Chauliodes.*

RAPHIDIDÆ.

1.—Ocelli present..... *Inocellia.*
 Ocelli absent..... *Raphidia.*

Suborder MEGALOPTERA.

This embraces five families, which may be separated as follows:

1.—Anterior legs raptorial..... *MANTISPIDÆ.*
 Anterior legs not raptorial..... 2.
 2.—Wings covered with whitish powder..... *CONIOPTERYGIDÆ.*
 Wings not powdered..... 3.
 3.—Antennæ clavate..... *MYRMELEONIDÆ.*
 Antennæ not clavate..... 4.
 4.—Antennæ moniliform..... *HEMEROBIDÆ.*
 Antennæ setiform..... *CHrysopidæ.*

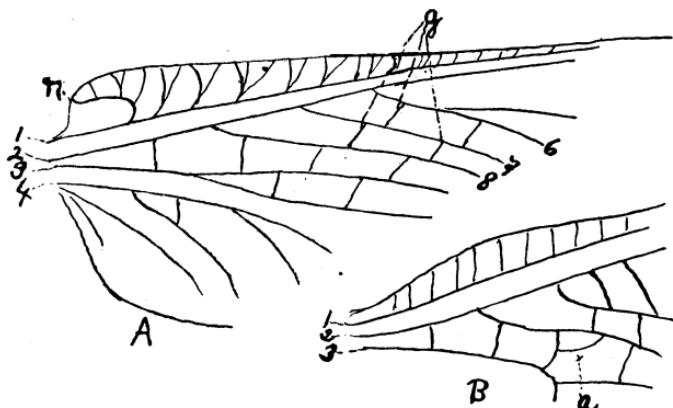


Fig. 5.—Hemerobid.

A, Hemerobius; 1, subcostal; 2, radius; 3, cubitus; 4, postcubitus; 6, 7, 8, sectors; n, recurrent vein; g, gradate veins. B, Chrysopa; a, third cubital cell.

Key to the Genera.

CONIOPTERYGIDÆ.

1.—Wings ciliated, eyes reniform **Aleuronia.**
 Wings not ciliated, eyes globose **Coniopteryx.**

MANTISPIDÆ.

1.—Female with a long ovipositor **Symphasis.**
 Female without ovipositor **Mantispa.**

CHRYSOPIDÆ.

1.—A horn between antennæ **Meleoma.**
 No horn 2.
 2.—Third cubital cell equally divided **Nothochrysa.**
 Third cubital cell unequally divided **Chrysopa.**

HEMEROBIDÆ.

1.—Ocelli present **Dilar.**
 Ocelli absent 2.
 2.—A recurrent vein 3.
 No recurrent vein 4.
 3.—Last joint of maxillary palpi truncate, large species **Polystæchotes.**
 Last joint of maxillary palpi subulate, small species **Hemerobius.**
 4.—Subcosta joined to the radius at tip 5.
 Subcosta free from radius at tip 6.
 5.—Subcostal space free **Sisyla.**
 Subcostal space with one basal veinlet **Climacia.**
 6.—But one sector, often but two wings **Psectra.**
 Several sectors, four wings 7.
 7.—Wings acute at apex, outer margin excised **Berotha.**
 Wings entire, rounded **Micromus.**

MYRMELEONIDÆ.

This comprises two well-marked sub-families.

Antennæ long, nearly as long as wings **Ascalaphinæ.**
 Antennæ short, not one-third as long as wings **Myrmeleoninæ.**

Myrmeleoninæ.

1.—Claws dilated at base, very stout **Acanthaclisis.**
 Claws not dilated, slender 2.
 2.—Wings with a black band at tip or ocellate spots **Dendroleon.**
 Unlike above 3.
 3.—No spurs on tibiae **Maracanda.**
 Spurs present 4.
 4.—A double series of costal areoles, at least before pterostigma, spurs no longer than the two basal joints of tarsus **Brachynemurus.**
 A single series of costal areoles **Myrmeleon.**

Ascalaphinæ.

1.—Eyes sulcated.....	2.
Eyes entire.....	Ptynx.
2.—Hind margin of wings entire	Ulula.
Hind margin of hind wings excised.....	Colobopterus.

Suborder MECAPTERA.

PANOPIDÆ.

The "Scorpion-flies," as they are called, because of the peculiar structure of the male genitalia, are a very well defined group. They are the ancestors of the Diptera. Our forms, though not uncommon, are not numerous. *Panorpa* is restricted to the Eastern States. The larvæ have pro-legs like caterpillars.

Key to the Genera.

1.—Three ocelli.....	2.
Ocelli absent	4.
2.—Two claws to tarsus.....	3.
One claw to tarsus.....	Bittacus.
3.—Tarsal claws serrated.....	Panorpa.
Tarsal claws simple	Panorpodes.
4.—Wingless, or wings very short.....	Boreus.
Wings well developed	Merope.

Order TRICHOPTERA.

Although quite a number of species have been described from our country, but little good work has been done. The classification is in a very unsatisfactory form. The forms are common, easily collected, and not more difficult of study than moths. They are the stock from which Lepidoptera have sprung. I divide the order into seven families, which may be separated as follows :

1.—Spines on the legs, three ocelli	2.
No spines, only hairs and spurs.....	3.
2.—Four spurs on middle tibiæ.....	PHRYGANIDÆ.
Two or three spurs on middle tibiæ.....	LIMNEPHILIDÆ.
3.—Last joint of palpi not elongated, simple, not flexible.....	4.
Last joint of palpi elongate, flexible, palpi hairy.....	6.
4.—Male palpi 4-jointed, ocelli absent.....	5.
Male palpi 5-jointed, ocelli often present, when absent the spurs 2-4-4.	RHYACOPHILIDÆ.
5. No spurs on anterior legs.....	HYDROPTILIDÆ.
Spurs present on anterior legs	SERICOSTOMATIDÆ.

6.—Basal joint of antenna long and large, wings slender, no ocelli.

LEPTOCERIDÆ.

Basal joint of antenna shorter, wings broader, last joint of palpi multi-articulate..... HYDROPSYCHIDÆ.

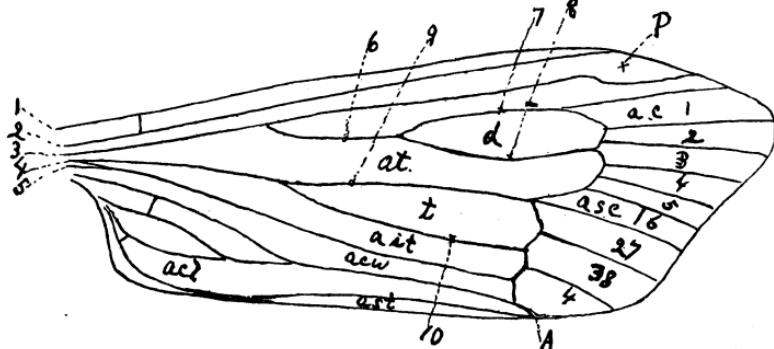


Fig. 6.—A Caddice Fly.

1, costal; 2, subcostal; 3, radius; 4, cubitus; 5, postcubitus; 6, radial sector; 7, radial sector, branch 1; 8, radial sector, branch 2; 9, thyridium; 10, divisialis; d, discoidal cell; t, thyridial cell; at, thyridial area; ait, inclavial area; acu, cubital area; acl, clavial area; ast, sutural area; ac, apical cells; asc, subapical cells; P, pterostigma; A, arculus.

Key to the Genera.

PHRYGANIDÆ.

Discoidal cell in fore wing much longer than its pedicel..... **Phryganea**.
 Discoidal cell in fore wing about as long as its pedicel..... **Agrypnia**.
 Discoidal cell in fore wing plainly shorter than its pedicel..... **Neuronia**.

LIMNEPHILIDÆ.

Spurs 0-2-2 or 1-2-2..... 1.
 Spurs 0-2-4 or 1-2-4..... 3.
 Spurs 0-3-3 or 1-3-3..... **Halesus**.
 Spurs 1-2-3..... **Eclisopteryx**, 4.
 Spurs 1-3-4..... 2.
 1.—Wings thickly pubescent..... **Enœcyla**.
 Pubescence very short and sparse..... **Cryptothrix**.
 2.—Hind wings pouched at base..... **Platophylax**.
 Hind wings not pouched at base..... **Apatania**.
 3.—Outer margin of fore wing entire..... **Neophylax**.
 Outer margin of fore wing with a projection..... **Anabolia**.
 4.—Outer margin of fore wing rounded..... **Limnephilus**.
 Outer margin of fore wing truncate.....

Subgenera.

ANABOLIA has two sub-genera, *Anabolia* and *Stenophylax*.

LIMNEPHILUS has six sub-genera as follows: *Limnephilus*, *Gonioaulius*, *Colpotaulius*, *Desmotaulius*, *Glyphotaulius*, *Grammotaulius*.

DECEMBER, 1892.

SERICOSTOMATIDÆ.

Spurs 1-4-4.....	Nosopus.
Spurs 2-4-4	2.
Spurs 2-2-4.....	1.
Spurs 2-2-2.....	Dasystoma.
Spurs 2-3-3	Brachycentrus.
1.—Discoidal cell in hind wing open	Sericostoma.
Discoidal cell in hind wing closed.....	Notidobia.
2.—Basal joint of antenna longer than the head.....	3.
Basal joint of antenna about as long as head.....	Helicopsyche.
3.—End of abdomen suddenly dilated.	Sphinctogaster.
End of abdomen normal.....	4.
4.—Discoidal cell in hind wing open.....	Silo.
Discoidal cell in hind wing closed	Mormonia.

HYDROPHILIDÆ.

We have but one genus, *Phryxicoma*.

RHYACOPHILIDÆ.

1.—No ocelli.....	Beraea.
Ocelli present.....	2.
2.—Spurs 3-4-4	Rhyacophila.
Spurs 2-4-4.....	Agapetus.
Spurs 1-4-4 or 0-4-4.....	Chimarrha.

LEPTOCERIDÆ.

1.—Last joint of maxillary palpi short, wings with a median cell, spurs 5 2-4-2, ♀ 2-4-4.....	Heteroplectron.
Last joint long, filiform	2.
2.—Four spurs on middle tibia.....	3.
Two spurs on middle tibia.....	4.
3.—Spurs 2-4-3.....	Aniscentropus.
Spurs 2-4-4.....	Molanna.
4.—Spurs 2-2-2.....	Leptocerus.
Spurs 0-2-2 or 1-2-2.....	5.
5.—Wings black	Mystacides.
Wings pale.....	Setodes.

HYDROPSYCHIDÆ.

1.—No ocelli.....	2.
Ocelli present.....	Philopotamus.
2.— Spurs 1-4-4	Smiceridea.
Spurs 2-4-4 or 2-2-4.....	3.
Spurs 3-4-4.....	Polycentropus.
3.—Spurs 2-4-4	4.
Spurs 2-2-4, large, well-marked species.....	Macronema.
4.—Second joint of maxillary palpus much longer than third or fourth.	
	Hydropsyche.
Second joint maxillary palpus not longer than third or fourth.....	5.
5.—Maxillary palpus, joints two, three and four equal.....	Psychomyia.
Third joint longer than second or fourth.....	Tinodes.

Catalogue of the Species.

PERLIDÆ.

PTERONARCYS Newm.

proteus Newm., H. 1, p. 14; H. 13, p. 281. N. Y., B. Am., Vt., Cal.
californicus Newp., H. 1, p. 16; H. 13, p. 283. B. Am., Utah, Wash., Cal., Col.
biloba Newm., H. 1, p. 15; H. 13, p. 284. N. Y., Minn., Can.
bicarinatus Prov., P. 1, 69.
nobilis Hag., H. 1, p. 15; H. 13, p. 285. N. Y., Tenn.
pictetii Hag., H. 13, p. 286. Pa., Minn., Can.
regalis Newm., H. 1, p. 15; H. 13, p. 286. B. Am., Mass., Me., N. Y., Minn., Can.
insignis Pict., H. 1, p. 16.
flavicornis Prov., P. 1, p. 70.
rectus Prov., P. 1, p. 68. Can.
regularis Hag., H. 18, p. 573. Nev.
badia Hag., H. 18, p. 573. Wy., Utah, Col.
(?) *dorsata* Say, H. 1, p. 20. Pa.

ACRONEURIA Pict.

abnormis Newm., H. 1, p. 17. U. S., Can.
rupinsulensis Walsh, W. 1, p. 363. Ill.
ruralis Hag., H. 1, p. 18. Mo.
arida Hag., H. 1, p. 18. N. Y., Pa.
hieroglyphica Prov., P. 1, 72. Can.
navalis Prov., P. 1, p. 73. Can.
riparia Prov., P. 1, 74. Can.

DICTYOPTERYX Pict.

signata Hag., H. 18, p. 575. Col., Cal., Oreg.

ISOGENUS Newm.

frontalis Newm., H. 1, p. 18. Can., N. Y., Ohio.
sulcata Prov., P. 1, p. 74.
elongatus Hag., H. 18, p. 576. Col., Utah.
colubrinus Hag., H. 18, p. 576. Idaho, B. Am.
clio Newm., H. 1, p. 19. Ga.
drymo Newm., H. 1, p. 19. Ga.
quebecensis Prov., P. 1, 72. Can.

PERLA Geoff.

annulipes Hag., H. 1, p. 22. D. C.
decipiens Walsh, W. 1, p. 364. Ill.
ebria Hag., H. 18, p. 577. Col.
elongata Walsh, W. 1, p. 366. Ill.
ephyre Newm., H. 1, p. 28. Ga., N. Y., La., Va.
flavescens Walsh, W. 1, p. 363. Ill., Can.
marginipes Prov., P. 1, p. 73.
lurida Hag., H. 1, p. 21. La.

lycorias Newm., H. 1, p. 21. N. Y.
olivacea Walk., H. 1, p. 23. Can.
placida Hag., H. 1, p. 28. N. Y., D. C.
postica Walk., H. 1, p. 23. La., D. C., Can.
similis Hag., H. 1, p. 26. Pa., Md.
sobria Hag., H. 18, p. 577. Col.
tristis Hag., H. 1, p. 22. N. Y., D. C.
varians Walsh, W. 1, p. 364. Ill.
xanthenes Newm., H. 1, p. 26. Pa., Ga.
capitata Pict., H. 1, p. 22. U. S. [no definite locality.]
clymene Newm., H. 1, p. 29. Ga.
couloni Pict., H. 1, p. 20. U. S. [no definite locality.]
immarginata Say, H. 1, p. 20. Ohio.
media Walsh, H. 1, p. 24. Can.
naica Prov., P. 1, p. 75. Can.
picta Pict., H. 1, p. 27. N. Am. [no definite locality.]

PSEUDOPERLA [Note 1.]

occipitalis Pict., H. 1, p. 27. Pa., N. Y., D. C., Md.
producta Walsh, W. 1, p. 365. Ill.
fumipennis Walsh, W. 1, p. 366. Ill.

CHLOROPERLA Pict.

bilineata Say, H. 1, p. 30. Ill., Can., N. Y., Ohio.
brunnipennis Walsh, W. 1, p. 367. Ill.
imbecilla Say, H. 1, p. 31. Ohio, N. Y.
nana Walsh, W. 1, p. 367. Ill., Can.
severa Hag., H. 1, p. 30. Alaska, Can.
citrinella Newp., H. 1, p. 31. Can., Nova Scotia.
decisa Walk., H. 1, p. 30. Can.
decolorata Walk., H. 1, p. 29. B. Am.
guerinii Pict., H. 1, p. 29. La.
maculata Pict., H. 1, p. 29. Pa.

ISOPTERYX Pict.

cydippe Newm., H. 1, p. 31. Ga., N. Y., D. C., Ill.

CAPNIA Pict.

minima Newp., H. 1, p. 33. Can., Ill.
necydalooides Pict., H. 1, p. 32. D. C., N. Y.
pygmæa Burm., H. 1, p. 32. Pa., N. Y., Newfoundland.
vernalis Newp., H. 1, p. 33. Can.

TÆNIOPTERYX Pict.

fasciata Burm., H. 1, p. 34. Pa., D. C., Ill.
frigida Hag., H. 1, p. 35. Md.
glacialis Newp., H. 1, p. 36. Can.
maura Pict., H. 1, p. 35. Pa., S. C., Can.
chicoutimiensis Prov., P. 1, p. 75.
similis Hag., H. 1, p. 34. D. C.

NEMOURA Pict.

albidipennis Walk., H. 1, p. 36. D. C., Ill., Nova Scotia.
completa Walk., H. 1, p. 36. Ill., Nova Scotia.
incerta Prov., P. 1, p. 217. Can.
completa Prov., not Walk.
perfecta Walk., H. 1, p. 37. N. Y., Can., Nova Scotia.
nigritta Prov., P. 1, p. 79.

LEUCTRA Steph.

brunnea Prov., P. 1, p. 80. Can.
ferruginea Walk., H. 1, p. 37. Nova Scotia.
tenella Prov., P. 1, p. 80. Can.
tenuis Pict., H. 1, p. 37. Pa., D. C., N. Y.

TERMITIDÆ.**CALOTERMES** Hagen.

castaneus Burm., H. 1, p. 1. Cal.
marginipennis Latr., H. 1, p. 2. Cal.

TERMOPSIS Heer.

angusticollis Walk., H. 1, p. 3. Pacific States, La.
occidentis Walk., H. 1, p. 3. Cal.

TERMES Linn.

flavipes Koll., H. 1, p. 3. U. S.
cinereus Buck., B. 1, p. 213. Texas.
tubiformans Buck., B. 1, p. 214. Texas.

EMBIDÆ.**OLIGOTOMA** Hag.

hubbardii Hag., H. 26, p. 142. Fla.

ATROPIDIDÆ.**HYPERETES** Hag.

tessulatus Hag., H. 25, p. 316. Mass., Ky., Me.

LEPINOTUS Hag.

piceus Mots., H. 1, p. 8; H. 25, p. 314. Cal.
inquilinus Hey., H. 25, p. 309. Mass.

CLOTHILLA West.

annulata Hag., H. 25, p. 307. Mass.
pulsatoria Linn., H. 25, p. 300. Mass., N. Brunswick.

ATROPOS Leach.

divinatoria Fab., H. 1, p. 8; H. 25, p. 289. Mass., Can., Ky., Mich., N. J.
purpurea Aaron, A. 1, p. 37. Pa.

DORYPTERYX Aaron.

pallida Aaron, A. 1, p. 38. Pa.

PSOCIDÆ.**CÆCILIUS** Curtis.

aurantiacus Hag., H. 1, p. 14. Ga., Ill.
confluens Walsh, W. 2, p. 185. Ill.
permadidus Walsh, W. 2, p. 185. Ill.
rufus Walsh, W. 2, p. 185. Ill.
definitus Aaron, A. 1, p. 38. Pa.
subflavus Aaron, A. 4, p. 13. Texas.
impactus Aaron, A. 4, p. 14. Pa.
nubilus Aaron, A. 4, p. 13. Texas.
pedicularis Linn., H. 24, p. 220. N. Y., Ill., Mass.
salicis Fitch, H. 1, p. 13.
geologus Walsh, W. 1, p. 362.
(?) *pusillus* Harris, Harr. 1, p. 331.

ELIPSOCUS Hagen.

conterminus Walsh, W. 2, p. 185. Ill.
pumilis Hag., H. 1, p. 9. N. Y.
unipunctatus Muell., H. 24. N. Y., Mass.
signatus Hag., H. 1, p. 9.
gracilis Harris, Harr. 1, p. 332.
maculosus Aaron, A. 1, p. 40. Pa.

MYOPSOCUS Hagen.

lugens Hag., H. 1, p. 9. D. C., Mass.
nubilus Harris, Harr. 1, p. 331.

PERIPSOCUS Hagen.

madescens Walsh, W. 2, p. 186. Ill.
madidus Hag., H. 1, p. 12. N. Y., Ga.

POLYPSCUS Hagen.

corruptus Hag., H. 1, p. 13. D. C., Ga., Ill.
abruptus Hag., H. 1, p. 13.

AMPHIENTOMUM Pict.

Echmepteryx Aaron.

hageni Packard, Pack. 2, p. 405. Me., Mass., Pa.
agilis Aaron, A. 4, p. 17. [Note 2.]

AMPHIGERONTIA Kolbe.

Blaste Kolbe.

juvenilis Kolbe, K. 1, p. 65. Pa.
lichenatus Walsh, W. 2, p. 183; H. 24, p. 196. Ill.
mæstus Hag., H. 1, p. 11; H. 24, p. 196. N. Eng., Ga.
variegatus Fab., see European authors. N. Y., Ga.

PSOCUS Latr.

amabilis Walsh, W. 1, p. 362. Ill.
atratus Aaron, A. 1, 39. Pa.

bifasciatus Walsh, W. 2, p. 183. Ill.
campestris Aaron, A. 4, p. 15. Texas.
contaminatus Hag., H. 1, p. 10. N. Y., Md., D. C., Ill.
inornatus Aaron, A. 1, p. 39. Pa.
leidyi Aaron, A. 4, p. 15. N. Am. [no definite locality.]
lucidus Harris, Harr. 1, p. 328. Mass.
novascotiæ Walk., H. 1, p. 11. Nova Scotia, N. Y., Ill.
perplexus Walsh, W. 1, p. 361. Ill.
pollutus Walsh, W. 1, p. 361. Ill.
purus Walsh, W. 1, p. 361. Ill.
quadrifasciatus Harris, Harr. 1, p. 331. Mass.
quietus Hag., H. 1, p. 12. N. Y., Ga.
semistriatus Walsh, W. 1, p. 361. Ill.
sexpunctatus Linné, A. 1, p. 39. Pa.
sparsus Hag., H. 1, p. 8. D. C., Md., W. Va., Mass.
infuscatus Harris, Harr. 1, p. 332.
speciosus Aaron, A. 1, p. 40. N. C.
striatus Walk., H. 1, p. 11. Nova Scotia, N. Y., D. C., Pa., Mass.
frontalis Harris, Harr. 1, p. 330.
texana Aaron, A. 4, p. 16. Texas.
var. *submarginatus* Aaron.
trifasciatus Prov., P. 1, p. 65. Can.
vigrofasciatus Hag. mss.
variabilis Aaron, A. 1, p. 38. Pa.
venosus Burm., H., 1, p. 10. Eastern U. S.
gregarius Harris, Harr. 1, p. 329.
canadensis Prov., P. 1, p. 65. Can. [Note 3.]
citricola Ashm., Ash. 1, p. 228. Fla.
flavidus Prov., P. 1, 64. Can.

EPHEMERIDÆ.

POLYMITARCY'S Eaton.

albus Say, H. 1, p. 40; E. 2, p. 47. Can., N. Y., N. J., La.
puella Pict., H. 1, p. 40.
Ephoron leukon Will., Will., p. 71-73.

HEXAGENIA Walsh.

bilineata Say, E. 2, p. 50. Eastern U. S.
limbata Hag. not Piet., H. 1, p. 41.
oculata Walk., H. 1, p. 43.
limbata Piet. U. S.
bilineata Hag. not Say, H. 1, p. 41.
variabilis Eaton, E. 2, p. 55. [Note 4.]
mundata Eaton, E. 2, p. 53. N. Car.
venusta Eaton, E. 2, p. 54. Texas, Utah.

PENTAGENIA Walsh.

vittigera Walsh, W. 1, p. 373; E. 2, p. 76. Ill., Texas.
quadripunctata Walsh, W. 2, p. 198; E. 2, p. 77. Ill., La.

EPHEMERA Linn.

compar Hag., H. 18, p. 578; E. 2, p. 65. Col.
decora Hag., not Walk., H. 1, p. 38; H. 18, p. 578. New England, N. Y.
varia Eaton, E. 2, p. 69.
flaveola Walsh, W. 1, p. 377; E. 2, p. 71. Ill.
guttulata Pict., H. 18, p. 579; E. 2, p. 66. N. Y., Can.
myops Eaton, not Walsh, E. 1, p. 71.
simulans Prov., not Walk., P. 1, p. 81.
simulans Walk., H. 1, p. 38; H. 18, p. 580; E. 2, p. 67. Can., Ill., Me., N. Y.
natata Walk., H. 1, p. 39.
guttulata Eaton, not Pict., E. 1, p. 69 (in part).
decora Walk., not Hag.
myops Walsh, W. 2, p. 207; E. 2, p. 72. Ill.

BLASTURUS Eaton.

cupidus Say, H. 1, p. 51; E. 2, p. 101. Can., N. Y., D. C., Ill.
P. concinnus Walk., H. 1, p. 51.
ignava Hag., H. 1, p. 47.
gravastellus Eaton, E. 2, p. 102. Mont.
nebulosus Walk., W. 1, p. 372.
P. odonatus Walsh, W. 1, p. 372.

SIPHLURUS Eaton. [Note 5.]

alternatus Say, H. 1, p. 49; E. 2, p. 219. N. Y., Ill., Can.
B. alternans Prov., P. 1, p. 82.
B. femorata Prov., not Say, P. 1, p. 83.
B. annulata Walk., H. 1, p. 48.
aridus Say, H. 1, p. 46; E. 2, p. 206. Ill., D. C., Ind., N. Y.
bicolor Walk., H. 1, p. 43; E. 2, p. 221. Can.
dissitus Eaton, E. 2, p. 210. Cal.
I. manca Eaton, ♂ not ♀, E. 1, p. 134.
exquisitus Eaton, E. 2, p. 212. Wash., Oreg.
femoratus Say, H. 1, p. 48; E. 2, p. 220. Ill., Ohio, N. Y.
B. interlineata Walsh, W. 2, p. 190.
intermedius Eaton, E. 2, p. 207. Ariz.
mancus Eaton, E. 2, p. 206. Texas, Mont.
miris Eaton, E. 2, p. 221. N. H.
occidentalis Eaton, E. 2, p. 218. Col., Wy., Nev., Wash.
H. brunnea Hag., ♀ not ♂, H. 18, p. 581.
quebecensis Prov., P. 1, p. 83; E. 2, p. 297. Can.
siccus Walsh, W. 1, p. 371; E. 2, p. 208. Ill., N. C.
subnotatus Eaton, E. 2, p. 211. Col.
typicus Eaton, E. 2, p. 222. Mass.

HEPTAGENIA Walsh. [Note 5.]

basalis Walk., H. 1, p. 50; E. 2, p. 298. Winnipeg.
brunnea Hag., H. 18, p. 581, ♂ and ♀. Nev.
hageni Eaton, E. 2, p. 253.
canadensis Walk., H. 1, p. 47; E. 2, p. 278. Can.
cruentata Walsh, W. 2, p. 205; E. 2, p. 300. Ill.
elegantula Eaton, E. 2, p. 253. Col., Ariz.

flavescens Walsh, W. 1, p. 373; E. 2, p. 266. Ill.
fusca Walk., H. 1, p. 45. Can.
jejuna Eaton, E. 2, p. 252.
geminata Eaton, E. 2, p. 250. Col.
integrum Eaton, E. 2, p. 248. Oreg., Wash.
interpunctata Say, H. 1, p. 44; E. 2, p. 267. N. Y., Ill., Ind., D. C., Va.
ongimanus Eaton, E. 2, p. 245. Col.
luridipennis Burm., H. 1, p. 49; E. 2, p. 280. Can.
novaboracana Licht., H. 1, p. 50.
maculipennis Walsh, W. 2, p. 206; E. 2, p. 301. Ill.
manifesta Eaton, E. 2, p. 253. Ill.
debilis Walsh, not Walk., W. 1, p. 371.
minus Eaton, E. 2, p. 249. Col.
nitidus Eaton, E. 2, p. 246. Oreg., Cal.
par Eaton, E. 2, p. 249. Ariz.
pudica Hag., H. 18, p. 581; E. 2, p. 298. Col.
pulchella Walsh, W. 1, p. 375; E. 2, p. 299. Ill., Md., D. C., La.
quebecensis Prov., P. 1, p. 84; E. 2, p. 297. Can.
simplex Walsh, W. 2, p. 204; E. 2, p. 300. Ill.
terminata Walsh, W. 1, p. 376; E. 2, p. 299. Ill.
interpunctata Prov., not Say, P. 1, p. 83.
verticis Say, H. 1, p. 46; E. 2, p. 278. Can., N. Y., D. C., Md., Tenn., Ga.
flaveola Walk., H. 1, p. 44.
vicaria Walk., H. 1, p. 48; E. 2, p. 280. Can., D. C., Ill., Ga.
pudica Hag., H. 1, p. 39.
vitrea Walk., E. 2, p. 254. Can.

BÆTISCA Walsh.

obesa Say, H. 1, p. 45; E. 2, p. 226. Cal., Ill., Ind., Mich.

LEPTOPHLEBIA West.

debilis Walk., H. 1, p. 86; E. 2, p. 98. Nova Scotia.
gregalis Eaton, E. 2, p. 98. Mt. Hood, Oreg.
mollis Eaton, E. 2, p. 97. N. H., N. Y., N. C., Wash.
pallipes Hag., H. 18, p. 582. Nev.
memorialis Eaton, E. 2, p. 98.
^(?) *præpedita* Eaton, E. 2, p. 99. Mass.
rufivenosa Eaton, E. 2, p. 99. Cal., Wash., Oreg.
vaciva Eaton, E. 2, p. 97. Mt. Hood, Oreg.

EPHERELLA Walsh.

consimilis Walsh, W. 1, p. 378; E. 2, p. 130. Ill.
excrucians Walsh, W. 1, p. 397; E. 2, p. 130. Ill., Mich., N. Y.
fuscata Walk., H. 1, p. 47. Can.
walkeri Eaton, E. 2, p. 129.
grandis Eaton, E. 2, p. 128. Col.
inermis Eaton, E. 2, p. 127. Col.
invaria Walk., H. 1, p. 48; E. 2, p. 129. Can.

BÆTIS Lach.

bioculata Pict., H. 1, p. 53; E. 2, p. 158. Can.
fluctuans Walsh, W. 1, p. 379. Ill.
posticata Say, H. 1, p. 53; E. 2, p. 169. Ind.
propinquæ Walsh, W. 2, p. 207; E. 2, p. 169. Ill.
vicina Walsh, not Hag., W. 1, p. 380.
pygmæa Hag., H. 1, p. 54; E. 2, p. 170. Can.
rubescens Prov., P. 1, p. 84; E. 2, p. 169. Can.
unicolor Hag., H., 1, p. 54. D. C.
hageni Eaton, E. 2, p. 169.

CENTROPTILUM Eaton.

luteolum Muell., E. 2, p. 175. Arctic America.

CALLIBÆTIS Eaton.

pictus Eaton, E. 2, p. 190. Cal., Tex.
tessalata Hag., H. 1, p. 50. Cal., Wash.
hageni Eaton, E. 2, p. 192.
ferruginea Walsh, W. 1, p. 379; E. 2, p. 193. Ill., Can., N. Y.
undata Hag., not Pict., H. 1, p. 53.

CLEON Leach.

dubium Walsh, W. 1, p. 380; E. 2, p. 190. Ill.
mendax Walsh, W. 1, p. 381; E. 2, p. 190. Ill., Mich., Mass.
vicinum Hag., H. 1, p. 54; E. 2, p. 190. D. C.

CÆNIS Steph.

diminuta Walk., H. 1, p. 55; E. 2, p. 147. Fla., Pa., N. Y., D. C.
amica Hag., H. 1, p. 55.
hilaris Say, H. 1, p. 54; E. 2, p. 147. Ind., N. Y.; Ill.

CALOPTERYGIDÆ.**CALOPTERYX** Leach.

æquabilis Say, H. 31, p. 246. Can., Me., Mass.
virginica Selys, in part.
hudsonica Hag., H. 31, p. 247. Lake Superior.
virginica Selys, in part.
yakima Hag., H. 31, p. 248. Wash.
amata Hag., H. 31, p. 244. N. H.
angustipennis Selys, H. 1, p. 56; H. 31, p. 242. Ky., Ga.
dimidiata Burm., H. 1, p. 57; H. 31, p. 245. Ky., Ga., Fla.
apicalis Burm., H. 1, p. 56; H. 31, p. 246. Pa., Del., Mass.
maculata Beauv., H. 1, p. 57; H. 31, p. 249. Eastern United States.
virginica Selys, in part.

HETÆRINA Hagen.

americana Fab., H. 1, p. 60. Mass., Me., Md., D. C., Ind., Ill., Wis., Mo.
pseudamericana Walsh, W. 2, p. 223.

basalis Hag. H. 1, p. 60. Texas.
texana Walsh, W. 2, p. 237.
bipartita Selys, S. 3, p. 17. Texas.
californica Selys, H. 1, p. 59. Cal., Mont., Yellowstone.
sclerata Walsh, W. 2, p. 227. Ill.
semproria Selys, H. 1, p. 62. Texas.
septentrionalis Selys, H. 1, p. 59. Ga.
titia Drury, H. 1, p. 61. Texas.
tricolor Burm., H. 1, p. 61. Pa., Ill., Ga., Texas.
rupannensis Walsh, W. 2, p. 230.
rupinsulensis Walsh, W. 1, p. 383.
limbata Selys, S. 3, p. 49.

AGRIONIDÆ.

ARCHILESTES Selys.

grandis Ramb., H. 1, p. 66; S. 1, p. 202. Texas.

LESTES Leach.

alacris Hag., H. 1, p. 67; S. 1a, p. 212. Texas.
congener Hag., H. 1, p. 67; S. 1a, p. 224. N. Y., Del., Mo.
disjuncta Selys, S. 1a, p. 210. Nova Scetia, Me., Ill., D. C.
eurina Say, H. 1, p. 70; S. 1a, p. 224; Scudd., 2, p. 66. Ill., N. Y., Me.
forcipata Ramb., S. 1a, p. 211. N. J., Ga., Ill.
hamata Hag., H. 1, p. 70.
hamata Selys, S. 1a, p. 208. D. C., Ill., Mo., N. Y., Me.
forceipala Hag., not Ramb., H. 1, p. 71.
inæqualis Walsh, W. 1, p. 385. Ill., Me.
rectangularis Say, H. 1, p. 66; S. 1a, p. 214. Ind., Mass., Md., N. Y., D. C., Ill., Ga., Me.
simplex Hag., H. 1, p. 68; S. 1a, p. 206. Texas.
stulta Hag., H. 1, p. 67; S. 1a, p. 212. Cal. [Note 6.]
unguiculata Hag., H. 1, p. 70; S. 1a, p. 207. N. J., Mo., Me., Ill.
vidua Hag., H. 1, p. 69; S. 1a, p. 225. La. [Note 6.]
vigilax Hag., S. 1a, p. 214. N. J., Fla.

ARGIA Ramb.

apicalis Say, H. 1, p. 91; S. 1a, p. 414. Va., D. C., Mo., La., Me.
bipunctulata Hag., H. 1, p. 90; S. 1a, p. 415. N. J., Ga., N. Y.
fumipennis Burm., H. 1, p. 97; S. 1a, p. 405. Ky., Ga., Fla.
moesta Hag., H. 1, p. 94; S. 1a, p. 384. Texas.
putrida Hag., H. 1, p. 96; S. 1a, p. 385. Md., Va., Wis., Ill., Texas, Me.
sedula Hag., H. 1, p. 94; S. 1a, p. 411. Va., Texas.
tibialis Ramb., S. 1a, p. 413. Va., Ill., Ga., Fla.
fontium Hag., H. 1, p. 91.
binotatum Walsh, W. 1, p. 387.
violacea Hag., H. 1, p. 80; S. 1a, p. 404. Md., Va., D. C., N. Y., Me.
vivida Hag., S. 1a, p. 406. Texas, Cal.

ANOMALAGRION Selys.

hastatum Say, H. 1, p. 77; S. 1b, 255. N. J., Md., Pa., Ind., Fla., La., Texas.

ICHNURA Charp.

cervula Selys, S. 1b, p. 262. Cal.

defixa Hag., H. 1, p. 80; S. 1b, p. 261. Cal.

perparva McLach., S. 1b, p. 263. Texas.

prognatha Hag., H. 1, p. 83; S. 1b, p. 259. Va.

ramburi Selys, S. 1b, p. 272. N. Y., Md., La., Fla., Me.

inera Hag., H. 1, p. 75.

credulum Hag., H. 1, p. 80.

verticalis Say, H. 1, p. 82; S. 1b, p. 265. Eastern U. S.

ramburi Hag., not Selys, H. 1, p. 76.

♂ **AMPHIAGRION** Selys.

saucium Burm., H. 1, p. 85; S. 1b, p. 285. Me., Mass., N. Y., Ill., Md., Pa., D. C.

OXYAGRION Selys.

rufulum Hag., H. 1, p. 86; S. 1b, p. 302. Cal.

NEHALENNIA Selys.

irene Hag., H. 1, p. 74; S. 1b, p. 1240. Ill., Wis., N. J.; Me., Mass., N. Y., Fla.
posita Hag., H. 1, p. 77; S. 1b, p. 1242. Mass., Pa., D. C., Ga.

PYRRHOSOMA Charp.

abbreviata Selys, S. 1b, p. 1299. Cal.

ERYTHROMMA Selys.

(?) *condita* Hag., S. 1b, p. 1305. Md., D. C., N. Y., Me.

ENALLAGMA Selys.

annexa Hag., H. 1, p. 87; S. 1b, p. 506. Mass., N. H., Me. [Note 7.]

aspersa Hag., H. p. 97; S. 1b, p. 518. N. Y., N. J., Ill.

boreale Selys, S. 1b, p. 507. Newfoundland. [Note 7.]

civile Hag., H. 1, p. 88; S. 1b, p. 514. N. Y., Pa., Md., D. C., Va., Mo., Texas.
 Me., Can.

canadensis Prov., P. 1, p. 94.

divagans Selys, S. 1b, p. 521. Mass.

doubledayi Selys, H. 1, p. 89; S. 1b, p. 502. Fla.

dura Hag., H. 1, p. 87; S. 1b, p. 500. Md., La., Fla.

ebria Hag., H. 1, p. 89; S. 1b, p. 513. Ill., Mo., N. Y., Me.

exsulans Hag., H. 1, p. 82; S. 1b, p. 522. Pa., Md., D. C., Va., Ill., Mo., Tex., Me.

hageni Walsh, W. 1, p. 386; S. 1b, p. 512. Can., Mass., Md., Ill., Mo., Me.

polluta Hag., H. 1, p. 83; S. 1b, p. 527. Fla., Me.

prævara Hag., H. 1, p. 88; S. 1b, p. 516. La.

robusta Selys, S. 1b, p. 509. Cal. [Note 7.]

signata Hag., H. 1, p. 84; S. 1b, p. 525. N. Y., Ill., Mo., Ga., La., Me., Md.

dentiferum Walsh, W. 2, p. 256.
traviata Selys, S. 1b, p. 519. Mass., N. Y.
aspersum Hag. (in part).

AGRION Selys.

interrogatum Hag., S. 1b, p. 1254. Saskatschewan.
resolutum Hag., S. 1b, p. 1263. Brit. Am.
 (?) *exclamationis* Selys, S. 1b, p. 1251. Cal.
 (?) *antennatum* Say, H. 1, p. 73. Ind.

ERYTHRAGRION Selys.

salvum Hag., H. 1, p. 85; S. 1c, p. 962. Texas.
boucardi Selys.

GOMPHIDÆ.

HERPETOGOMPHUS Selys.

compositus Selys, H. 1, p. 99; S. 8, p. 740. Texas, Oreg., Yellowstone.
designatus Selys, H. 1, p. 99. Texas.

OPHIOGOMPHUS Selys.

bison Selys, S. 9, p. 496; S. 10, p. 436. Cal.
colubrinus Selys, H. 1, p. 101; S. 10, 438. Can., Brit. Am., N. H.
mainensis Walsh, W. 2, p. 255; S. 10, p. 435. Me.
morrisoni Selys, S. 11, p. lxv. Nev.
rupinsulensis Walsh, W. 1, p. 388; S. 10, p. 434. Ill., Wis., Me., Can., N. Y.
severus Hag., H. 18, p. 591. Col., Mont., N. Mex., Yellowstone.

OCTOGOMPHUS Selys.

specularis Selys, H. 1, p. 110; S. 8, p. 760. Cal.

DROMOGOMPHUS Selys.

armatus Selys, H. 1, p. 102; S. 10, p. 467. Ga.
spinosis Selys, H. 1, p. 102. Ga., Ky., Texas, Ill., W. Va., Me.
spoliatus Selys, H. 1, p. 103. Texas.

GOMPHUS Leach.

abbreviatus Hag., S. 10, p. 464. Me.
albistylus Hag., S. 10, p. 460. Me.
adelphus Selys, H. 1, p. 104; S. 10, p. 457. N. Y.
amnicola Walsh, W. 1, p. 396. Ill.
brevis Hag., S. 10, p. 462. N. Y., Can., Me.
confraternus Selys, S. 8, p. 744. Cal.
consanguis Selys, S. 11, p. lxvi. N. Car.
crassus Hag., S. 10, p. 453. Ky.
dilatatus Ramb., H. 1, p. 103. Ga., Fla., Mich.
exilis Selys, H. 1, p. 108; S. 8, p. 778. Md., Mass., Me.
externus Selys, H. 1, p. 104; S. 10, p. 452. N. Mex., Texas, Neb., Ill.
consobrinus Walsh, W. 2, p. 242.

fraternus Say, H. 1, p. 104. N. Y., Ill., N. H., Texas (?).
furcifer Hag., S. 10, p. 458. Mass., Mich.
graslinellus Walsh, W. 1, p. 394. Ill.
intricatus Selys, H. 1, p. 108. Texas, Mo.
lividus Selys, H. 1, p. 106. S. Car., D. C., Mass.
militaris Selys, H. 1, p. 107. Texas.
minutus Ramb., H. 1, p. 108. Ga.
nævius Hag., S. 10, p. 462. Pa., Me.
notatus Ramb., H. 1, p. 110; S. 10, p. 466. Ill., Mich., Can.
fluvialis Walsh, W. 1, p. 394.
olivaceus Selys, S. 8, p. 749. Cal.
pallidus Ramb., H. 1, p. 105. Ga., La.
pilipes Selys, H. 1, p. 106.
parvulus Selys, H. 1, p. 109; S. 10, p. 459. Nova Scotia, N. H., Me., Pa.
plagiatus Selys, H. 1, p. 109; S. 10, p. 465. Md., S. Car.
quadricolor Walsh, W. 2, p. 246. Ill., Mass., Mich.
scudderii Selys, S. 8, p. 752. U. S. [No definite locality.]
sobrinus Selys, S. 8, p. 745. Cal.
spicatus Selys, H. 1, p. 107; S. 7, p. 183. Can., Mass., N. Y.
spiniceps Walsh, W. 1, p. 389; S. 8, p. 750. Ill., Mass.
vastus Walsh, W. 1, p. 391. Ill., N. Y., Mass., D. C., Md.
ventricosus Walsh, W. 2, p. 249; S. 10, p. 453. Ill., Mich., Mass., Va.
vilosipes Selys, H. 1, p. 105. Mass., Mich.

PROGOMPHUS Selys.

obscurus Ramb., H. 1, 110; S. 10, 658. Ga., Texas, Oreg., Mass. (?)
borealis Selys, S. 8, p. 764.

GOMPHOIDES Selys.

stigmata Say, H. 1, p. 111. Texas.

HAGENIUS Selys.

brevistylus Selys, H. 1, p. 114. N. Y., Mass., Wis., Can., Md., Kan., Tex., Me.

TACHOPTERYX Hag.

hageni Selys, S. 11, p. lxviii. Nev.
thoreyi Selys, H. 1, p. 117; S. 10, p. 696. Mass., N. Y., Md., Ky.

CORDULEGASTERIDÆ.

CORDULEGASTER Leach.

diastatops Selys, S. 10, p. 685. D. C., N. H., Mass., Can., Me.
lateralis Scudd., Scudd. 1, p. 211.
dorsalis Selys, H. 1, p. 116; S. 8, p. 772. Oreg., Alaska.
erroneus Hag., S. 10, p. 688. N. C., Ky.
fasciatus Ramb., S. 10, p. 692. Ga.
maculatus Selys, H. 1, p. 115; S. 10, p. 689. Mass., Conn., Md., Ga., Can., Me.
obliquus Say, H. 1, p. 116; S. 10, p. 692. Ind., Ill., Mass., Me., Can.
sayi Selys, H. 1, p. 115; S. 10, p. 686. N. H., Md., Mass., Me., Can., Ga.

ÆSCHNIDÆ.**ANAX** Leach.

junius Drury. H. 1, p. 118; H. 31, p. 305. U. S., Can.
longipes Hag., H. 1, p. 118; H. 31, p. 303. Mass., Md., Ga., Fla.
concolor Brauer, H. 31, p. 304.
walsinnghami McLach., McL. 8, p. 127; H. 31, p. 306. Cal., Ariz., N. Mex.
validus Hag. mss.

GOMPHÆSCHNA Hag.

antilope Hag., H. 17, p. 354. Md.
furcillata Say, H. 1, p. 131; H. 17, p. 351. Mass., Mich., Ga.

NEURÆSCHNA Hag.

vinosa Say. Can., Me., N. Y., Mass., Pa., Md., D. C., Car., Ga., Ky.
quadriguttata Burm., H. 1, p. 130.

BASILÆSCHNA Selys.

janata Say, H. 1, p. 125. Mass., N. H., N. J., Me.

ÆSCHNA Fab.

constricta Say, H. 1, p. 123. U. S., Can., Brit. Am.
contorta Hag., H. 1, 126.
palmata Hag., Stett. Z. xvii, p. 369.
arundinacea Selys, Ann. Soc. Ent. Belg. xvii, 36.
clepsydra Say, H. 1, p. 122. Northeastern U. S.
propinqua Scudd., ♀, Scudd. 1, p. 215.
crenata Hag., Stett. Z. xvii, p. 369. N. H., Arctic America.
eremita Scudd., Scudd. 1, p. 213.
héros Fab., H. 1, p. 128. Eastern U. S. [Note 8.]
ingens Ramb., H. 1, p. 128. Ga., Fla., La.
abbotti Hag., H. 17, p. 350.
juncea Linn., H. 1, p. 120. N. H., Boreal America.
hudsonica Hag., H. 1, p. 123.
propinqua Scudd., ♂ in part, Scudd. 1, p. 215.
multicolor Hag., H. 1, p. 121. N. Mex., Mont., Yellowstone.
mutata Hag., H. 1, p. 124. N. Am. [no definite locality.]
pentacantha Ramb., H. 1, p. 129. Ill., La., Texas.
septentrionalis Burm., H. 1, p. 120; H. 31, p. 354. N. H., British America, Newfoundland.
sitchensis Hag., H. 1, p. 119; H. 31, p. 353. Alaska, Brit. Am.
verticalis Hag., H. 1, p. 122. Northern U. S.
clepsydra Walsh, not Say.
propinqua Scudd., ♂ in part, Scudd. 1, p. 215.
virens Ramb., H. 1, p. 127. Ga. (?)
grandis Linné, H. 1, p. 126. N. J. [locality probably wrong], European.

CORDULIDÆ.

MACROMIA Ramb.

*Didymops.**Epophthalmia.**annulata* Hag., H. 1, p. 132; S. 4, p. 544. Texas, Ill.*flavipennis* Walsh, W. 1, p. 398.*georgiana* Selys, S. 6, p. 197. Ga.*illinoiensis* Walsh, W. 1, p. 397. N. H., Mass., Pa., Tenn., Ill.*magnifica* Selys, S. 5, p. 22. Cal.*pacifica* Hag., H. 1, p. 133; S. 4, p. 542. Texas, Cal.*taeniolata* Ramb., H. 1, p. 132; S. 4, p. 527. Pa., Md., Ga.*transversa* Say, H. 1, p. 135; S. 4, p. 548. Vt., Mass., N. Y., Pa., D. C., S. C.,

Ga., Ky., Mich.

EPITHECA Charp.

*Somatochlora.**albicincta* Burm., H. 1, p. 138; S. 4, p. 303. N. H., Labrador, Alaska.*eremita* Scudd., Scudd. 1, p. 215.*cingulata* Selys, S. 4, p. 302; S. 6, p. 195. Labrador, Newfoundland, N. H.*elongata* Scudd., Scudd. 1, p. 218; S. 4, p. 292. N. H., Nova Scotia, Wis.*saturata* Hag. mss.*filosa* Hag., H. 1, p. 136; S. 4, p. 287. Md., Ga.*forcipata* Scudd., Scudd. 1, p. 216; S. 6, p. 194. N. H., Me., Nova Scotia, Br. A.*chalybea* Hag. mss.*franklini* Selys, S. 6, p. 195. Brit. Am.*septentrionalis* Selys (in part), S. 4, p. 298; S. 5, p. 20.*hudsonica* Selys, S. 4, p. 301. Brit. Am.*linearis* Hag., H. 1, p. 137; S. 6, p. 193. Ill., Mo., Pa., Ga.*procera* Selys, S. 4, p. 285.*nasalis* Selys, S. 5, p. 21. N. Am. [no definite locality.] ♀*obsoleta* Say, H. 1, p. 136; S. 4, p. 279; H. 31, p. 369. Ind., Mass., Ill., La.*molesta* Walsh, W. 2, p. 254.*semicircularis* Selys, S. 4, p. 295; S. 6, p. 194. Col., Brit. Am., Utah.*septentrionalis* Selys, S. 4, p. 298; S. 6, p. 195. Labrador, Brit. Am.*richardsoni* Hag. mss.*tenebrosa* Say, H. 1, p. 137; S. 4, p. 289. Nova Scotia, Md., N. J., Ind. Ill.*walshii* Scudd., Scudd. 1, p. 217; S. 4, p. 293. N. H.*yamaskanensis* Prov., P. 1, 104; S. 6, p. 191; H. 31, p. 367. Can.

CORDULIA Leach.

*Tetragoneura.**costalis* Selys, S. 4, p. 275; S. 5, p. 20. Ga.*cynosura* Say, S. 4, p. 270. Me., Mass., N. Y., Mich., Ohio, Ill., Pa., Ga., La., Fla.*lateralis* Hag., H. 1, p. 139.*basigutta* Selys, S. 4, p. 271.*levida* Selys, S. 4, p. 264. Me., Mass., Conn., N. Y., N. J., Md.*libera* Hag., S. 4, p. 263. Can., Mich.*lintneri* Hag., S. 6, p. 187; H. 31, p. 371. N. Y., Saskatchewan.

nannodiplax vacua Hag., H. 8, p. 91; H. 31, p. 248.
selysi Hag., S. 6, p. 189. Ga.
semliaqua Burm., H. 1, p. 140; S. 4, p. 272. Nova Scotia, Mass., N. Y., D. C., S. C., Ga., Fla.
diffinis Hag. mss.
complanata Ramb., S. 4, p. 273.
shurtleffi Scudd., Scudd. 1, p. 271; S. 4, p. 265. N. H., Nova Scotia, Can., Brit. Amer.
bifurcata Hag. mss.
spinigera Selys, S. 4, p. 269; S. 5, p. 20. Can., Ga., Mich., Vancouver.
spinosa Hag., S. 6, p. 188. Ga.
uhleri Selys, S. 4, p. 274. Me., Mass., N. J.

LIBELLULIDÆ.

PANTALA Hag.

flavescens Fab., H. 1, p. 142. Southern States.
hymenæa Say, H. 1, p. 142. Ind., Ill., Texas.

TRAMEA Hag.

abdominalis Ramb., H. 1, p. 145. Mass., Fla.
insularis Scudd., not Hag., ♀, Scudd. 1, p. 191.
carolina Linn., H. 1, p. 143. Mass., N. Y., N. J., Southern States.
chinensis De Geer, H. 1, p. 144. Carolina (?).
insularis Hag., H. 1, p. 186. Fla.
lacerata Hag., H. 1, p. 145. Ill., Texas, Md., Mich., N. Y.
onusta Hag., H., 1, p. 144. Mo., Fla., Texas.

CEЛИTHEMIS Hag.

amanda Hag., H. 1, p. 183. Ga., N. J.
balteata Hag., H. 1, p. 140. Texas, Fla.
elisa Hag., H. 1, p. 182. Mass., N. Y., Can., Mich., Ill., Ga., Me.
eponina Drury, H. 1, p. 147. U. S. east of Rocky Mountains.
fasciata Kirb., Kirb. 1, p. 326. Can., Ga., Fla.
ornata Ramb., H. 1, p. 182. Pa., Ga., Fla., Me.

PERITHEMIS Hag.

domitia Drury, H. 1, p. 185. Eastern U. S.

LIBELLULA Linn.

Plathemis. [Note 4.]

trimaculatus De Geer, H. 1, p. 149. U. S. east of Rocky Mountains.
subornata Hag., H. 1, p. 149. Cal., N. Mex., Texas, Kan., Ariz.
axillena West., H. 1, p. 156. Ga., La., Fla., Texas. [Note 10.]
auripennis Burm., H. 1, p. 155. Atlantic and Gulf States south of N. Y.
basalis Say. N. Y., N. J., Pa., Md., D. C., Va., Can., Mich., Ill., Kan.
luctuosa Burm., H. 1, p. 152.
composita Hag., H. 12, p. 728. Yellowstone.
deplanata Ramb., H. 1, p. 154. Pa., Ga., N. C.
exusta Say. Me., Mass., Wis., Brit. Am., Can. Wash.
julia Uhler, H. 1, p. 153.

flavida Ramb., H. 1, p. 156. Texas, Yellowstone, Mont.
forensis Hag., H. 1, p. 154; H. 18, p. 585. Ariz., Cal., Brit. Am., Yellowstone, Mont.
incesta Hag., H. 1, p. 155; H. 31, p. 384. N. H., Mass., Car., Texas, Can., Fla., Me. [Note 10.]
lydia Drury, H. 1, p. 155. South Atlantic and Gulf States.
nodisticta Hag., H. 1, p. 151; H. 18, p. 583. Yellowstone, Mont.
odiosa Hag., H. 1, p. 152. Texas.
plumbea Uhl., H. 1, p. 157. N. J., Md., Ga.
pulchella Drury, H. 1, p. 153. U. S. east of Rocky Mountains and Utah.
quadrimaculata Linn., H. 1, p. 150. Mass., Mich., Ill., Can., Wis., Idaho, Wy., Utah, Me.
quadrupla Say, H. 1, p. 157. Mass., N. J., Md.
saturata Uhler, H. 1, p. 152; H. 18, p. 586. Ariz., Yellowstone, Mont.
semifasciata Burm., H. 1, p. 151. Mass., N. Y., N. J., Md., D. C., Car., Fla., * Texas, Mich., Ill., Me.

ORTHEMIS Hagen.

discolor Burm., H. 1, p. 160. Fla., Texas.

DYTHEMIS Hagen.

fugax Hag., H. 1, p. 163. Texas.
mendax Hag., H. 1, p. 164. Ariz., Texas.
velox Hag., H. 1, p. 163. Texas.

TRITHEMIS Hagen.

umbrata Linn., H. 1, p. 158. Ga. (?)

LEPTHEMIS Hagen.

gravida Calvert, Cal. 1, p. 35. Texas, Fla.
hæmatogastra Burm., H. 1, p. 161. Ga. (?)

MESOTHEMIS Hagen.

collocata Hag., H. 1, p. 171. Texas, Yellowstone, Cal., Ariz.
flota Hag., H. 1, p. 172. Cal., Vancouver, Yellowstone.
longipennis Burm., H. 1, p. 173. Eastern U. S., Texas, Mont., Cal.
simplicicollis Say, H. 1, p. 170. Eastern U. S., Texas, Mont., Utah.
gundlachi Seudd., Seudd. 1, p. 195.

DIPLAX Charp.

Leucorrhinia. [Note 11.]

albifrons Charp., H. 1, p. 177. Ga., Mo., Texas, Mass.
assimilis Uhl., H. 1, p. 174. Ill., D. C., Mo., Md., Pa., Wis.
atrides Hag., H. 18, p. 588. Yellowstone.
borealis Hag., H. 32, p. 231. Brit. Am.
berenice Drury, H. 1, p. 178. Mass., N. Y., N. J., Md., Va.
corrupta Hag., H. 1, p. 171. Ill., Kan., Col., La., Texas, Mont., Cal.
costifera Hag., H. 1, p. 175. Me., Mass., N. Y., N. Red River.
decisa Hag., H. 18, p. 588. Dak., Col., Yellowstone.
frigida Hag., H. 32, p. 231. Mass., Can., Dak., Brit. Am.
glacialis Hag., H. 32, p. 234. Nova Scotia, Can., N. H., Mass., Nev.

hudsonica Selys, H. 1; p. 180; H. 32, p. 233. Nova Scotia, Br. Am., Me., Mass.
hageni Calvert, Cal. 1, p. 36.
intacta Hag., H. 1, p. 179; H. 32, p. 235. Northern U. S., Can.
madida Hag., H. 1, p. 174; H. 31, p. 385. Dak., Mont., Yellowstone, Cal., Vancouver.
flavicosta Hag., H. 31, p. 386.
minuscula Ramb., H. 1, p. 183. Ga., Ky., Fla.
obtrusa Hag., H. 8, p. 95. Mass., Ill., Can.
pallipes Hag., H. 18, p. 589. Col., Texas.
proxima Calvert, Cal. 1, p. 38; H., 32, p. 232. Nova Scotia, Me., Mass., N. H., Brit. Am., Wash.
rubicundula Say, H. 1, p. 176; H. 31, p. 385. Eastern U. S., Can.
scotia Donov., H. 1, p. 179. Can., N. Red River, Yellowstone (?)
semicincta Say, H. 1, p. 176. Me., Mass., N. H., N. Y., Pa., Md.
vicina Hag., H. 1, p. 175. Me., Mass., N. Y., N. J., Pa., Md., D. C., Ill., Can.
imbuta Say, H. 1, p. 185. Md. [Note 12.]

NANNO THEMIS Brauer.

bella Uhl., H. 1, p. 186. Me., Mass., N. Y., Ct., N. J., Md., Ga., Can
maculosa Hag., H. 1, p. 187. Ga.

SIALIDÆ.

SIALIS Latr.

infumata Newm., H. 1, p. 188. U. S.
americana Ramb., H. 1, p. 188. Ga., Pa.

CHAULIODES Latr.

angusticollis Hag., H. 1, p. 191. Ga., Va., Ill.
californicus Walk., H. 1, p. 190. Cal.
lunatus Hag. Eastern U. S.
serricornis Hag., not Say, H. 1, p. 190.
pectinicornis Linn., H. 1, p. 189. Atlantic States.
rastricornis Ramb., H. 1, p. 189. Ga., S. C.
serricornis Say. Pa., Ga., Md., Mass., N. Y.
maculatus Ramb. and Hagen, H. 1, p. 191.
virginensis Westw., H. 1, p. 190. Va.
disjunctus Walk., W. 1, p. 334. Vancouver's Island.

CORYDALIS Latr.

cornuta Linn., H. 1, p. 192. Eastern U. S.
cognata Hag., H. 1, p. 193. N. Mex.

RAPHIDIDÆ.

RAPHIDIA Linn.

adnixa Hag., H. 1, p. 195; Alb. 1, p. 146. Cal., Oreg., Wash.
bicolor Alb., Alb. 1, p. 152. Col.
assimilis Alb., Alb. 1, p. 144. Vancouver Island.
media Burm., H. 1, p. 195. N. Am. [no definite locality.]
oblita Hag., H. 1, p. 195; Alb. 1, p. 149. Cal., Oreg., Wash., Col.

INOCELLIA Schn.

hageni Alb., Alb. 1, p. 171. Cal.
inflata Hag., H. 1, p. 196; Alb. 1, p. 167. Cal., Wash., Ariz.
longicornis Alb., Alb. 1, p. 169. Cal.

MANTISPIDÆ.**MANTISPA** Ill.

brunnea Say, H. 1, p. 207. U. S.
burquei Prov., P. 1, p. 247.
interrupta Say, H. 1, p. 209. Pa., Va., Texas,
mœsta Hag., H. 1, p. 210. Tenn.
viridis Walk., H. 1, p. 209. Fla.

SYMPHASIS Hagen.

signata Hag., H. 21, p. 208. Cal.

CONIOPTERYGIDÆ.**ALEURONIA** Fitch.

westwoodii Fitch, H. 1, p. 196. U. S.

CONIOPTERYX Halid.

vicina Hag., H. 1, p. 197. D. C.

CHrysopidæ.**MELEOMA** Fitch.

signorettii Fitch, H. 1, p. 200. Vt.

NOTHOCHRYSA McLach.

californica. [Note 13.]

CHrysopa Leach.Group *oculata*.

oculata Say, H. 1, p. 211. U. S.
albicornis Fitch, H. 1, p. 212. Miss.
latipennis Schn., H. 1, p. 214. Pa., N. Y., Can.
illepida Fitch, H. 1, p. 212. N. Y., Ill. [Note 14.]
fulvibucca Fitch, H. 1, p. 212. N. Y.
chi Fitch, H. 1, p. 213. N. Y.
epsilon Fitch, H. 1, p. 213. N. Y., D. C.
mississippiensis Fitch, H. 1, p. 213. Miss.
transmarina Hag., H. 1, p. 213. Can.
chlorophana Burm., H. 1, p. 212. N. Y., Mich.

Group *nigricornis*.

nigricornis Burm., H. 1, p. 214. Atlantic States.
pavida Hag., H. 1, p. 216. S. C.
ampla Walk., H. 1, p. 215. Ga.
cubana Hag., H. 1, p. 215. Va.
lineaticornis Fitch, H. 1, p. 215. N. Y.

Group *rufilabris*.]

rufilabris Burm., H. 1, p. 219. Eastern U. S.
quadripunctata Burm., H. 1, 218. S. C., D. C., Pa., N. Y.
emuncta Fitch, H. 1, p. 220. N. Y.
attenuata Walk., H. 1, p. 220. Fla., Va.
interrupta Schn., H. 1, p. 220. Pa., N. Y.
virginica Fitch, H. 1, p. 219. Va.
sulphurea Fitch, H. 1, p. 219. N. J.
repleta Walk., H. 1, p. 220. Ga.

Group *plorabunda*.

plorabunda Fitch, H. 1, p. 221. N. Y., Ill.
illinoiensis Shimer, Shim. 1, p. 208.
externa Hag., H. 1, p. 221. D. C., Cal.
flava Scop., H. 1, p. 222. Pa.
harrisii Fitch, H. 1, p. 221. N. Y.
robertsonii Fitch, H. 1, p. 221. Ind. Terr.
pseudographa Fitch, H. 1, p. 222. Ill.
 Not placed.
longicornis Walk., H. 1, p. 210. Ga.
punctinervis McLach., McL. 10, p. 24. Texas.
citri Ashm., Ash. 2. Fla.

HEMEROBIDÆ.

POLYSTOCHOTES Burm.

punctatus Fab., H. 1, p. 206. U. S.
vittatus Say, H. 1, p. 207. Pa., N. J.

HEMEROBIUS Linn.

alternatus Fitch, H. 1, p. 201. N. Y.
amiculus Fitch, H. 1, p. 200. N. Y., Ill.
castaneæ Fitch, H. 1, p. 202. Northern States.
citrinus Hag., H. 1, p. 204. N. Am. [no definite locality.]
conjunctions Fitch, H. 1, p. 203. N. Y.
longicollis Walk., H. 1, p. 200. Ga.
longifrons Walk., H. 1, p. 206. Can., N. Y.
occidentalis Fitch, H. 1, p. 201. Ill., D. C.
perparvus McLach., McL. 10, p. 22. Texas.
stigmaterus Fitch, H. 1, p. 202. Northern States.
tutatrix Fitch, H. 1, p. 202. N. Y., D. C., Cal.
pinidimus Fitch, H. 4, p. 203. N. Y.
hyalinatus Fitch, H. 1, p. 203. N. Y.
posticus Walk., H. 1, p. 204. Ga.
simulans Walk., H. 1, p. 204. Can.
marginatus Walk., H. 1, p. 205. Nova Scotia.
humuli Walk., H. 1, p. 205. Ga.
crispus Walk., H. 1, p. 205. Nova Scotia.
obliteratus Walk., H. 1, p. 205. Ga.

PSECTRA Hagen.

diptera Linn., H. 29, p. 21. Ill., Me., Mich.
delicatulus Fitch, H. 1, p. 201.

MICROMUS Ramb.

angulatus Steph., H. 28, p. 280. N. H., Can.
angustus Hag., H. 28, p. 287. Fla., N. C.
^(?) *subanticus* Walk., H. 1, p. 203.
insipidus Hag., H. 1, p. 199; H. 28, p. 285. Eastern U. S.
sobrius Hag., H. 1, p. 199.
montanus Hag., H. 28, p. 279. Mass., N. H.
variolosus Hag., H. 28, p. 284. Col.

SISYRA Burm.

vicaria Walk., H. 1, p. 197. Ga., N. Y.

DILAR Ramb.

americana McLach., McL. 7, p. 55. Ky.

CLIMACIA McLach.

areolaris Hag., H. 1, p. 199; McL. 10, p. 21. Southern States.

BEROTHA Walk.

Isoscelipiteron Costa.

pennsylvanicum Brauer, Brauer 1, p. 898. Pa.
flavicornis Walk., H. 1, p. 193. Southern States.
hamatus Walk., H. 1, p. 199. N. Am. [no definite locality.]

MYRMELEONIDÆ.**MYRMELEONINÆ.****ACANTHACLISIS** Ramb.

americana Drury, H. 1, p. 223; H. 30, p. 134. N. Y., N. C., S. C., Ga., Fla.
texana Hag., H. 30, p. 147. Texas.
congener Hag., H. 1, p. 224; H. 30, p. 154. N. Mex., Oreg., Wash.

DENDROLEON Hagen.

^(?) *gratus* Say, H. 1, p. 225. Ind., Mo., Pa., Miss., Fla.
obsoletus Say, H. 1, p. 225; H. 30, p. 187. Eastern U. S.

MARACANDA McLach.

conspersa Ramb., H. 30, p. 212. Eastern U. S.
nebulosus Oliv., H. 1, p. 228.
contaminatus Burm., H. 1, p. 227.
signata Hag., H. 30, p. 215. Mich.
henshawi Hag., H. 30, p. 216. Oreg.

BRACHYNEMURUS Hagen.

abdominalis Say, H. 1, p. 226; H. 30, p. 57. U. S.
juvencus Hag., H. 1, p. 234.
blandus Hag., H. 1, p. 235; H. 30, p. 73. N. Mex., Wy., Idaho, Nev.
carrizonus Hag., H. 30, p. 93. Texas.
longipalpis Hag., H. 30, p. 95. Cal., Nev.
longicaudus Burm., H. 1, p. 227; H. 30, p. 35. Ga., Fla.
nebulosus Ramb., H. 1, p. 228; H. 30, p. 36. Ga., D. C., S. C.
salvus Hag., H. 1, p. 227.
nigrilabris Hag., H. 30, p. 72. N. Mex., Col., Wy., Utah, Dak.
peregrinus Hag., H. 1, p. 234; H. 30, p. 59. Western States.
sackeni Hag., H. 30, p. 94. Texas, Cal., Ariz.
(?) *inscriptus* Hag., H. 1, p. 230. N. Mex.
(?) *pumilis* Burm., H. 1, p. 230. S. C.

MYRMELEON Linn.

immaculatus De Geer, H. 1, p. 231; H. 30, p. 188. U. S.
mobilis Hag., H. 30, p. 204. Ga., Ala.
immaculatus Burm. and Hag. (in part)
rusticus Hag., H. 1, p. 233; H. 30, p. 210. Texas, N. Mex.
(?) *ingeniosus* Hag., H. 1, p. 236. S. C., Fla.
exitialis Walk., H. 1, p. 229. Cal.
ferox Walk., H. 1, p. 229. Cal.
tectus Walk., H. 1, p. 232. Fla.
crudelis Walk., H. 1, p. 232. Fla.
diversus Hag., H. 12, p. 729. Yellowstone.

ASCALAPHINÆ.*Holophtalmi.***PTYNX** Lefeb.

appendiculatus Fab., McL. 6, p. 239. Ga.
juvenilis McLach., McL. 6, p. 239. Texas.
furcifer McLach., McL. 9, p. 509. Ariz.

*Schizophtalmi.***ULULA** Ramb.

hyalina Latr., H. 1, p. 238; McL. 6, p. 246. Southern States.
quadripunctata Burm., H. 1, p. 238; McL. 6, p. 247. N. Y., Md., D. C.

COLOBOPTERUS Ramb.

excisus Hag., H. 30, p. 153. Fla., Ky., Ct., Mass.
Euptilon is bogus.

PANORPIDÆ.**BITTACUS** Latr.

apicalis Uhler, H. 1, p. 248. Ill., Va.
apterus McLach., McL. 4, p. 100. Cal.
chlorostigma McLach., McL. 7, p. 36. Cal.
occidentis Walk., H. 1, p. 247. Pa.
pilicornis Westw., H. 1, p. 246. N. Y., Can.

punctiger Westw., H. 1, p. 247. Ga.
stigmaterus Say, H. 1, p. 247. Mo., Md., Ga., D. C.
strigosus Hag., H. 1, p. 246. Ill., D. C., Mo., N. Y.

PANORPA Linn.

americana Swed., H. 1, p. 242. Ga., Ky.
confusa Westw., H. 1, p. 244. Mass., N. Y.
debilis Westw., H. 1, p. 243. Pa., N. Y., Ga.
lugubris Swed., H. 1, p. 241. S. C., Fla., Ga.
maculosa Hag., H. 1, p. 245. Pa., N. Y.
nebulosa Westw., H. 1, p. 243. N. Y., D. C., Mass.
rufa Gray, H. 1, p. 242. Ga.
rufescens Ramb., H. 1, p. 241. Atlantic States.
subfurcata Westw., H. 1, p. 244. Can.
venosa Westw., H. 1, p. 242. Eastern U. S.

PANORPODES McLach.

oregonensis McLach., McL. 7, p. 33. Oreg.

MEROPE Newm.

tuber Newm., H. 1, p. 248. Pa., Va., D. C.

BOREUS Latr.

brumalis Fitch, H. 1, p. 240. N. Y., D. C.
nivoriundus Fitch, H. 1, p. 240. N. Y.
californicus Pack., Pack. 2, p. 408. Cal.

PHRYGANIDÆ.

PHRYGANEA Linn.

cinerea Walk., H. 1, p. 252; H. 14, p. 410. Brit. Am., Me.
improba Hag., H. 14, p. 417. Saskatschawan, N. Y.
interrupta Say, H. 1, p. 256; H. 14, p. 411. Mass., N. Y., N. J., Mo.
vestita Walk., H. 1, p. 253; H. 14, p. 418. Mass., Ga.
commixta Walk., H. 1, p. 253.

AGRYPNIÆ Curt.

glacialis Hag., H. 14, p. 426. Saskatschawan, Labrador.
straminea Hag., H. 14, p. 425. Saskatschawan.
colorata Hag., H. 14, p. 424. Saskatschawan.

NEURONIA Leach.

angustipennis Hag., H. 14 p. 400. Ill., Mich., Mass.
concatenata Walk., H. 14, p. 385. Mass., Ga., Fla., Can.
irrorata Hag., not Fab., H. 1, p. 249.
dossuaria Say, H. 1, p. 255; H. 14, p. 383. Mass., N. H.
ocellifera Walk., H. 1, p. 252; H. 14, p. 400. Mass., Ill., La.
ocelligera Walk., H. 1, p. 250; H. 14, p. 389. Nova Scotia.
pardalis Walk., H. 1, p. 250; H. 14, p. 394. Nova Scotia, N. H., Can., Labrador.
postica Walk., H. 1, p. 251; H. 14, p. 398. Eastern U. S., Can.
Ptilostomis kovalevskii Kol., var. B.
semifasciata Say, H. 1, p. 250; H. 14, p. 396. Brit. Am., Eastern U. S.
Ptilostomis kovalevskii Kol., var. A.
stygipes Hag., H. 14, p. 388. Me., N. H., Mass.

LIMNEPHILIDÆ.**COLPOTAULIUS** Kol.*perpusillus* Walk., H. 1, p. 254. Can.**LIMNEPHILUS** Leach.*combinatus* Walk., H. 1, p. 255. Can., Brit. Am.*rhombicus* Walk. (Hag.), not Fab., H. 1, p. 254.*externus* Hag., H. 1, p. 257. North Red River.*extractus* Walk., H. 1, p. 260. Can., North Red River.*hyalinus* Hag., H. 1, p. 258.*femoralis* Kirby, Walk., H. 1, p. 260. N. Am. [no definite locality.]*gravidus* Hag., H. 1, p. 257. Cal.*indivisus* Walk., H. 1, p. 260. Can., Nova Scotia.*subguttatus* Walk., H. 1, p. 261.*perjurus* Hag., H. 1, p. 258. Alaska.*(?) radiatus* Say, H. 1, p. 256. Northwest Terr.*(?) sericeus* Say, H. 1, p. 256. Northwest Terr.*vastus* Hag., H. 1, p. 257. Alaska.**GORIOTAULIUS** Kol.*dispectus* Walk., H. 1, p. 259. Can., Nova Scotia.*multifarius* Walk., H. 1, p. 259.*(?) plaga* Walk., H. 1, p. 263.*femoralis* Kirby (Kol.), Kolen., Trichopt. p. 31. Arctic America.*nebulosus* Kirby, H. 1, p. 259. Brit. Am., Can.*subpunctulatus* Zett., H. 1, p. 261.*partitus* Walk., H. 1, p. 261. Can.*trimaculatus* Hag., not Zett., H. 1, p. 261.*pudicus* Hag., H. 1, p. 262. N. Y., D. C. [Note 15.]*sitchensis* Kol., H. 1, p. 263. Alaska. [No description.]*submonilifer* Walk., H. 1, p. 260. N. Am. [no definite locality.]**GLYPHOTÆLIUS** Steph.*hostilis* Hag., H. 14, p. 444. Brit. Am., N. H., Mich.**GRAMMOTAULIUS** Kol.*interrogationis* Zett., H. 1, p. 254; H. 14, p. 450. Greenland.*præcox* Hag., H. 14, p. 451. Brit. Am.**DESMOTAULIUS** Kol.*planifrons* Kol., H. 1, p. 263. Greenland, Labrador.**ANABOLIA** Steph.*bimaculata* Walk., H. 1, p. 263. Can., North Red River, Ill.*sordida* Hag., H. 1, p. 264.*consocia* Walk., H. 1, p. 264. N. Am. [no definite locality.]*modesta* Hag., H. 1, p. 265. Labrador.

HALESUS Steph.

argus Harris, Harr. 1, p. 333. Mass.
guttifer Walk., H. 1, p. 266. Can., Ga., La.
hostis Hag., H. 1, p. 266. North Red River, Ill.
indicans Walk., H. 1, p. 258. Ga.
indistinctus Walk., H. 1, p. 266. Newfoundland, La.
(?) *amicus* Hag., H. 1, p. 265.
maculipennis Kol., H. 1, p. 267. N. Am. [no description, no definite locality.]
mutatus Hag., H. 1, p. 267. Labrador.
scabripennis Ramb., H. 1, p. 265. Ga.

ENECYLA Ramb.

areolata Walk., H. 1, p. 267. Can.

STENOPHYLAX Kol.

divergens Walk., H. 1, p. 255. N. Am., [no definite locality] Col.
gentilis McLach., McL. 5, p. 108. N. H.
gilvipes Hag., H. 18, p. 601. Brit. Columbia.
limbata McLach., McL. 5, p. 108. Newfoundland.
punctatissimus Walk., H. 1, p. 264. Nova Scotia.

PLATYPHYLAX McLach.

atrides Hag., H. 18, p. 600. Col.
designata Walk., H. 1, p. 269. Brit. Am., Can., Nova Scotia, Col.
lepidia Hag., H. 1, p. 269. Pa.
subfasciata Say, H. 1, p. 269. Pa., Northwest Terr.

ECCLISOPTERYX Kol.

irrorata Fab. Can.
L. intercisa Walk., H. 1, p. 268.
præterita Walk., H. 1, p. 268. Brit. Am.

NEOPHYLAX McLach.

concinnus McLach., McL. 5, p. 111. N. Y.

APATANIA Kol.

pallida Hag., H. 1, p. 270. Can.
nigra Walk., H. 1, p. 270. Can.
(?) *hirtipes* Curt., H. 1, p. 295. Arctic Am.

CRYPTOTHRIX McLach.

difficilis Walk., H. 1, p. 268. Nova Scotia, Can., Mass., N. H.
P. coagulata (Say mss.), Prov.

SERICOSTOMATIDÆ.**SERICOSTOMA** Latr.

americana Walk., H. 1, p. 270. Ga.
crassicornis Walk., H. 1, p. 271. Ga.

NOTIDOBIA Steph.

griseola McLach., McL. 5, p. 112. Cal.
nigricula McLach., McL. 5, p. 113. Cal.

BRACHYCENTRUS Curtis.

fuliginosus Walk., H. 1, p. 272. Can., D. C.
incanus Hag., H. 1, p. 272.
lateralis Say, H. 1, p. 274. Ky.
numerosum Say, H. 1, p. 273. Ind.
signatus Fab., H. 1, p. 250. N. Am. [no definite locality.]

SILO Curtis.

californicus Hag., H. 1, p. 272. Cal.
griseus Hag., H. 1, p. 273. N. Y.

MORMONIA Steph.

togata Hag., H. 1, p. 273. Can., D. C.

OLIGOPLECTRUM McLach.

Dasystoma Hag.

rusticum Hag., H. 10, p. 267. Saskatchewan.

SPHINCTOGASTER Prov.

lutescens Prov., P. 1, p. 262. Can.

NOSOPUS McLach.

podager McLach., McL. 5, p. 114. Cal.

HELICOPSYCHE Bremi.

borealis Hag., H. 1, p. 271; H. 7, p. 252. N. Y., Can.

HYDROPTILIDÆ.**PHRYXICOMA** Eaton.

albicornis Hag., H. 1, p. 275; E. 4, p. 138. Can.
 (?) *tarsalis* Hag., H. 1, p. 275; E. 4, p. 148. Can.

RHYACOPHILIDÆ.**RHYACOPHILA** Pict.

fuscula Walk., H. 1, p. 295. Can., N. Y.
torva Hag., H. 1, p. 296. D. C., N. Y.
soror (Hag.) Prov., P. 1, p. 142. Can.

CHIMARRHA Leach.

aterrima Hag., H. 1, p. 297. Can., N. Y., Pa., D. C., Ga.
socia Hag., H. 1, p. 297. D. C.

AGAPETUS Curtis.

celatus McLach., McL. 5, p. 139. Cal.
 (?) *tenebrosus* Walk., H. 1, p. 274. Can.

BEREA Steph.

maculata Hag., H. 1, p. 296. Can.
obscura Walk., H. 1, p. 297. Can.
viridiventris Say, H. 1, p. 296. Ohio.

LEPTOCERIDÆ.**MOLANNA** Curt.

cinerea Hag., H. 1, p. 276. Can.
inconspicua Walk., H. 1, p. 275. Ga.
rufa Hag., H. 1, p. 276. N. Y.

LEPTOCERUS Leach.

albostictus Hag., H. 1, p. 276. N. Am. [no definite locality.]
dilutus Hag., H. 1, p. 277. Ill.
indecisus Walk., H. 1, p. 279. Can.
mentiens Walk., H. 1, p. 278. Can.
lugens Hag., H. 1, p. 276.
submacula Walk., H. 1, p. 278. Can.
transversus Hag., H. 1, p. 279. D. C.
variegatus Hag., H. 1, p. 278. Ill.

SETODES Ramb.

albida Walk., H. 1, p. 283. Can.
nivea Hag., H. 1, p. 281.
exquisita Walk., H. 1, p. 280. Ga., D. C., Can.
flaveolata Hag., H. 1, p. 282. D. C., La.
ignita Walk., H. 1, p. 281. Ga., D. C.
immobilis Hag., H. 1, p. 283. Can.
incerta Walk., H. 1, p. 278. Can., D. C.
micans Hag., H. 1, p. 283.
injusta Hag., H. 1, p. 283. Can., Ill.
pavida Hag., H. 1, p. 282. D. C.
piffardii McLach., McL. 1, p. 160. Can.
resurgens Walk., H. 1, p. 282. Can., D. C.
cinerascens Hag., H. 1, p. 282.
sagitta Hag., H. 1, p. 284. Fla.
uwarowii Kol. Ga., Pa., Fla., S. C., D. C., Ohio.
candida Hag., H. 1, p. 280.

MYSTACIDES Latr.

atra Pact. Can.
sepulchralis Walk., H. 1, p. 277.
nigra Linn., H. 1, p. 277. D. C.

ANISCENTROPUS McLach.

latifascia Walk., H. 1, p. 279; McL. 2. N. Am. [no definite locality.]
G. elegans Walk., H. 1, p. 279.
pyraloides Walk., H. 1, p. 271; McL. 2. Ga., Pa.

HETEROPLECTRON McLach. [Note 16.]

borealis Prov., P. 1, p. 263. Can.
californicum McLach., McL. 5, p. 125. Cal.

HYDROPSYCHIDÆ.**MACRONEMA** Pict.

flava Hag., H. 1. p. 285. Mo.
polygrammaticum McLach., McL. 5, p. 129. Pa. (?)
transversa Walk., H. 1, p. 289. Ga.
zebrata Hag., H. 1, p. 285. Can., N. Y., Md., Va., D. C., W. Va.

HYDROPSYCHE Pict.

alternans Walk., H. 1, p. 288. Can., N. Y., D. C.
morosa Hag., H. 1, p. 287.
indecisa Walk., H. 1, p. 288.
chlorotica Hag., H. 1, p. 290. Can., N. Y., Ill.
confusa Walk., H. 1, p. 291. Can.
depravata Hag., H. 1, p. 290. Ga.
dubitans Walk., H. 1, p. 289. N. Am. [no definite locality.]
incommoda Hag., H. 1, p. 290. Ga.
maculicornis Walk., H. 1, p. 289. Can.
phalerata Hag., H. 1, p. 287. Can., N. Y., D. C., Pa.
reciproca Walk., H. 1, p. 288. N. Am. [no definite locality.]
dubia Walk., H. 1, p. 288.
robusta Walk., H. 1, p. 289. N. Am. [no definite locality.]
scalaris Hag., H. 1, p. 286. Can., D. C.
sordida Hag., H. 1, p. 290. Can., D. C.

SMICRIDEA McLach.

fasciatella McLach., McL. 5, p. 136. Texas.

PHILOPOTAMUS Leach.

distinctus Walk., H. 1, p. 291. N. Y.

POLYCENTROPUS Curt.

cinereus Hag., H. 1, p. 293. Can.
confusus Hag., H. 1, p. 293. N. Y., D. C.
crassicornis Walk., H. 1, p. 292. Ga.
crepuscularis Walk., H. 1, p. 292. Can.
invariatus Walk., H. 1, p. 292. Nova Scotia.
lucidus Hag., H. 1, p. 294. N. Y., Pa.
validus Walk., H. 1, p. 292. U. S. [no definite locality.]
vestitus Hag., H. 1, p. 293. D. C.

PSYCHOMYIA Latr.

flavida Hag., H. 1, p. 294. Can., D. C.

TINODES Steph.

consueta McLach., McL. 5, p. 138. Cal.
livida Hag., H. 1, p. 295. Can.
(?) *parva* Walk., H. 1, p. 294. Can.

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NOTES.

Note 1.—*Pseudoperla*; Mr. MacGillivray proposes this genus for those species of *Perla* with but two ocelli.

Note 2.—*Echmepteryx agilis* is, I think, identical with *A. hageni* Pack. I use the genus *Amphientomum*, as Hagen saw Packard's specimen and said they belonged to this genus; therefore, I consider *Echmepteryx* unnecessary.

Note 3.—*Psocus canadensis* Prov. is probably *P. purus* Walsh.

Note 4.—Eaton has given new names to several of our Ephemeralds without, I think, just cause; they are as follows: *Hexagenia variabilis*, *Ephemera varia*, *Heptagenia hageni*, *H. jejuna*, *Leptophlebia memorialis*, *Ephemerella walkeri*, *Baetis hageni* and *Callibaetis hageni*.

Note 5.—I have united several of Eaton's genera to *Siphlurus* and *Heptagenia*. *Ameletus* and *Chironetes* equal *Siphlurus*; *Rithrogenia*, *Ecdyrsus*, *Iron*, *Cinygma*, all equal *Heptagenia*.

Note 6.—*Lestes stulta* is perhaps a race of *L. forcipata*; and *L. vidua* of *L. congener*.

Note 7.—De Selys considers *Enallagma annexa*, *boreale* and *robusta* races of the European *E. cyathigerum*.

Note 8.—De Selys puts *Æ. heros* in a separate genus, *Epiæschna*, as the eyes touch only at one point.

Note 9.—I unite *Plathemis* to *Libellula*. Kirby has recently divided *Libellula* into various genera.

Note 10.—*Libellula incesta* and *axillena* are probably varieties of *L. lydia*.

Note 11.—I have united *Leucorrhina* to *Diplax*. In some specimens of *D. intacta* the sectors of the arculus are not stalked; usually, however, they are pedicellate.

Note 12.—*Diplax imbuta* may be a discolored specimen of *Mesothemis simplicollis*. I have seen a specimen of the latter species with a red thorax and abdomen with the last few segments marked with black.

Note 13.—

NOTHOCHRYSA McLachlan.

Genus related to *Chrysopa*; differs in having the third cubital cell equally divided.

N. californica n. sp.—Length of body 9 mm.; length of wings 12 mm. Dark, antennæ and palpi black. Head reddish yellow, antennal sockets surrounded with black, three black streaks above connected with the black of antennal sockets, a few narrow blackish lines below antennæ; prothorax black, with a median light stripe widening at each end, the extreme margin light, rest of thorax and abdomen black, the posterior margin of the segments on sides narrowly yellowish. Legs testaceous, middle and hind femora darker, tips of tibiae and joints of tarsi black. Wings hyaline, veins mostly black, costa and base of radius on fore wings, costa and almost whole of radius on hind wings yellowish, pterostigma brownish; tips of wings rounded; prothorax widest behind, gradually narrowed in front. Abdomen short; antennæ shorter than wings.

Locality.—California.

Note 14.—I consider *Chrysopa illepeda*, *fulvibucca*, *chi*, *ypsilone* and *mississippiensis* as all equal to *C. oculata*.

Note 15.—*Limnephilus pudicus* is probably the same as *L. submonilifer* Walk.

Note 16.—*Heteroplectron* is placed in the Leptoceridæ by McLachlan. It will not go to that family in the key. The wings are broad, and the last joint of the palpi is short; if it belongs to the Leptoceridæ, it is certainly a very aberrant member.

ABBREVIATIONS.

A.—Aaron.	Kirb.—Kirby.
Alb.—Albarda.	McL.—McLachlan.
Ash.—Ashmead.	P.—Provancher.
B.—Buckley.	Pack.—Packard.
Cal.—Calvert.	S.—De Selys.
E.—Eaton.	Scudd.—Scudder.
H.—Hagen.	Shim.—Shimer.
Harr.—Harris.	W.—Walsh.
K.—Kolbe.	Walk.—Walker.